LIPPINCOTT LIBRARY
MAY 4 1956
GEOGRAPHY & INDUSTRY

The EDISON ELECTRIC INSTITUTE BULLETIN

April
1956

EEI Convention Program

Sales Conference Summary

Ours Is a Selling Job

Harllee Branch, Jr.

Present Status of Atomic Power

Walker L. Cisler

Area Conception in Industrial Sales

George E. Whitwell

ublished Monthly by
Edison Electric
Institute

ELECTRICAL RESEARCH STATISTICS
THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

(Includes Investor-Owned Companies, Cooperatives, and Government-Owned Utilities)

January, 1955-1956

SOURCE AND DISPOSAL OF ENERGY—MONTH OF JANUARY

	1956	1955	%
NET GENERATION* (Kwhrs in Thousands)			
By Fuel Burning Plants	41,764,324	34,526,368	+21.0
By Water Power Plants	9,355,522	9,428,846	− 0.8
Total Generation	**51,119,846**	**43,955,214**	**+16.3**
Add—Net Imports Over International Boundaries	145,082	300,333	−51.7
Less—Company Use	149,995	134,157	+11.8
Less—Energy Used by Producer	1,374,663	888,259	+54.8
Net Energy for Distribution	**49,740,270**	**43,233,131**	**+15.1**
Lost and Unaccounted for	4,988,542	4,977,139	+ 0.2
Sales to Ultimate Customers	**44,751,728**	**38,255,992**	**+17.0**

CLASSIFICATION OF SALES

NUMBER OF CUSTOMERS—As of January 31st			
Residential or Domestic	44,514,089	43,241,015	+ 2.9
Rural (Distinct Rural Rates)	1,650,272	1,616,654	+ 2.1
Commercial or Industrial:			
Small Light and Power	6,041,228	5,959,540	+ 1.4
Large Light and Power	287,403	277,589	+ 3.5
Other Customers	168,783	166,352	+ 1.5
Total Ultimate Customers	**52,661,775**	**51,261,150**	**+ 2.7**
KILOWATTHOUR SALES—During Month of January (Kwhrs in Thousands)			
Residential or Domestic	12,528,547	11,070,559	+13.2
Rural (Distinct Rural Rates)	682,654	601,378	+13.5
Commercial or Industrial:			
Small Light and Power	7,054,459	6,384,335	+10.5
Large Light and Power	22,680,063	18,472,456	+22.8
Street and Highway Lighting	454,751	419,944	+ 8.3
Other Public Authorities	876,568	829,033	+ 5.7
Railways and Railroads:			
Street and Interurban Railways	238,943	252,555	− 5.4
Electrified Railroads	187,571	184,771	+ 1.5
Interdepartmental	48,172	40,961	+17.6
Total to Ultimate Customers	**44,751,728**	**38,255,992**	**+17.0**
Revenue from Ultimate Customers (Thousands)	**$734,354**	**$659,163**	**+11.4**

RESIDENTIAL OR DOMESTIC SERVICE

AVERAGE CUSTOMER DATA—For 12 months ended January 31, 1956			
Kilowatthours per Customer	2,778	2,564	+ 8.3
Average Annual Bill	$73.34	$68.97	+ 6.3
Revenue per Kilowatthour	2.64¢	2.69¢	− 1.9

* By Courtesy of the Federal Power Commission.

THE EDISON ELECTRIC INSTITUTE BULLETIN is published monthly by the Edison Electric Institute, an association of electric light and power companies in the United States and its territorial possessions. Its affiliate members consist of members of the Canadian Electrical Association.

The objectives of the Edison Electric Institute are:

The advancement in the public service of the art of producing, transmitting, and distributing electricity and the promotion of scientific research in such field.

The ascertainment and making available to the members and the public of factual information, data, and statistics relating to the electric industry.

To aid its operating company members to generate and sell electric energy at the lowest possible price commensurate with safe and adequate service, giving due regard to the interests of consumer, investor, and employee.

•

Closing date for the BULLETIN is the tenth of the month preceding the month of issue.

Manuscripts and correspondence relating to the BULLETIN should be addressed to the Editor, Edison Electric Institute, 420 Lexington Avenue, New York 17, N. Y.

The Edison Electric Institute does not assume responsibility for, nor necessarily endorse or approve, statements made by contributors to the BULLETIN.

•

Subscription price of the BULLETIN is $2.00 per year in the United States; $3.00 per year in foreign countries.

Entered as second-class matter, August 17, 1933, at the post office at Philadelphia 2, Pa., under the act of March 3, 1879. Publication office, 56th and Chestnut Sts., Philadelphia 39, Pa. Editorial office, 420 Lexington Ave., New York 17, N. Y. Volume 24, No. 4, 1956.

The EDISON ELECTRIC INSTITUTE BULLETIN

April, 1956

Vol. 24 No. 4

Articles, Speeches, Reports

EEI Convention to Set Sights on Goals, Suggest Courses of Action for Attainment 99

Industry's Campaigns and Automation Stressed at 22nd EEI Sales Conference 107

Ours Is a Selling Job
Harllee Branch, Jr. 113

Present Status of Atomic Power
Walker L. Cisler 116

Area Conception in the Development of Industrial Sales
George E. Whitwell 121

First Demonstration of Fiber Glass Poles Is Jointly Sponsored by Consumers Power 124

News, Notes, Miscellany

Conventions and Meetings 98

75th Anniversary of Founding Celebrated by The Cleveland Electric Illuminating Company 115

Ebasco Holds Ninth Safety Seminar 120

29 Safety Merit Awards Point to Potential Record Year.... 123

Florida Power & Light's Advertising Campaign Wins Freedom Foundation's Washington Medal 125

PUAA National Convention Marks 35th Anniversary of Ad Group 125

Personals 126

CONVENTIONS AND MEETINGS

1956

MAY

2- 4 EEI Accident Prevention Committee, Coronado Hotel, St. Louis, Mo.

4 NARUC Executive Committee, Leamington Hotel, Minneapolis, Minn.

7- 8 PEA System Planning Committee, Hotel Alexander, Hagerstown, Md.

7- 9 EEI Purchasing and Stores Committee Annual Meeting, Sheraton Plaza Hotel, Boston, Mass.

7- 9 Air Conditioning and Refrigeration Institute Annual Meeting, Homestead, Hot Springs, Va.

8 EEI Commercial Electric Cooking Conference, Sheraton Hotel, Chicago, Ill.

10-11 PEA Transmission and Distribution Committee, Skytop Lodge, Skytop, Pa.

10-11 PUAA Annual Convention, Philadelphia, Pa.

14-15 PEA Communications Committee, Nittany Lion Inn, State College, Pa.

14-16 Pacific Coast Electrical Association Annual Convention, Las Vegas, Nev.

14-17 ASME Design Engineering Conference, Convention Hall, Philadelphia, Pa.

15-16 New Home Subcommittee of EEI Residentional Promotional Committee, Terrace Plaza Hotel, Cincinnati, Ohio

17 EEI Industrial Relations Committee, Willis E. Hughes Memorial, Rochester, N. Y.

17-18 PEA Electrical Equipment Committee and Relay Committee, Roosevelt Hotel, Pittsburgh, Pa.

21 EEI-AGA Orientation Meeting, Headquarters, New York, N. Y.

21-22 PEA Annual Accounting Conference, Warwick Hotel, Philadelphia, Pa.

21-23 Northwest Electric Light and Power Association, Business Development and Personnel Section Meeting, Benjamin Franklin Hotel, Seattle, Wash.

28-29 Arkansas Power & Light Co. Dealer Coordination Committee Southeastern Area Workshop, Arlington Hotel, Hot Springs, Ark.

JUNE

4- 6 24TH ANNUAL EEI CONVENTION, ATLANTIC CITY, N. J.

10-14 National Association of Electrical Distributors, Ambassador, Chelsea and Ritz Hotels, Atlantic City, N. J.

17-21 ASME Semi-Annual Meeting, Statler Hotel, Cleveland, Ohio

17-22 59th Annual Meeting American Society Testing Materials and 12th Apparatus Exhibit, Chalfonte-Haddon Hall, Atlantic City, N. J.

18-20 American Society Heating and Air-Conditioning Engineers, Semi-Annual Meeting, Washington, D. C.

18-20 Canadian Electrical Association Annual Convention, Manoir Richelieu, Murray Bay, P. Q.

1956

21-23 Northwest Electric Light and Power Association, Accounting and Business Practice Section, Multnomah Hotel, Portland, Ore.

22 Public Utilities Association of the Virginias Accident Prevention Conference, Hotel Roanoke, Roanoke, Va.

24-26 Wisconsin Utilities Association Accounting Section Convention, Schwartz Hotel, Elkhart Lake, Wis.

24-27 Michigan Electric Association Annual Convention, Grand Hotel, Mackinac Island, Mich.

25-29 American Society for Engineering Education Annual Meeting, Iowa State College, Ames, Iowa

25-29 AIEE, Summer and Pacific General Meetings, San Francisco, Calif.

JULY

16-21 International Organization for Standardization Council Meeting, Geneva, Switzerland

24-27 NARUC Annual Convention, Sheraton Palace, San Francisco, Calif.

SEPTEMBER

13-14 EEI-AGA Organization Meeting, Edgewater Beach Hotel, Chicago, Ill.

14-15—Public Utilities Association of the Virginias 38th Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

17-19 EEI Industrial Relations Annual Round Table Conference, Drake Hotel, Chicago, Ill.

17-21 IES National Technical Conference, Hotel Statler, Boston, Mass.

24-26 EEI Meter & Service Committee, Purdue University, Lafayette, Ind.

26-28 PIP Workshop Conference, Blackstone Hotel, Chicago, Ill.

OCTOBER

1- 3 EEI Prime Movers Committee, Hotel Radisson, Minneapolis, Minn.

3- 5 Indiana Electrical Association Annual Convention, French Lick Springs Hotel, French Lick, Ind.

7-10 Rocky Mount Electrical League Annual Fall Convention, Broadmoor Hotel, Colorado Springs, Colo.

15-16 EEI Electrical Equipment Committee, Hotel Statler, Cleveland, Ohio

18-19 EEI Transmission and Distribution Committee, Hotel Statler, Buffalo, N. Y.

22-24 7th National Conference on Standards, Am Standards Assn, in conjunction with 38th Annual Meeting, Hotel Roosevelt, New York, N. Y.

NOVEMBER

15 EEI Industrial Relations Committee, EEI Headquarters, New York, N. Y.

26-28 EEI Accident Prevention Committee, Statler Hotel, Hartford, Conn.

The EDISON ELECTRIC INSTITUTE
BULLETIN

EEI Convention to Set Sights on Goals, Suggest Courses of Action for Attainment

THE Annual EEI Convention, to be held at Atlantic City, June 4-6, will present an unusually fine program which will review recent industry accomplishments, indicate immediate and long-term goals, and suggest courses of action designed to attain these goals.

This annual evaluation of the electric industry by utility executives serves a tremendously vital purpose and has become increasingly important through the years. It affords management an opportunity to examine closely the activities of the industry. While the various committees of the Institute are concerned with specific details in the field of engineering, finance, sales, and others, the Annual Convention considers all of these in broad outline.

The subjects selected by the Program Committee are those which are of paramount interest at the present time, and are matters which concern the industry, member companies, their employees, and, indeed, in most cases our customers as well.

The new ideas and theories advanced, and the exchange of information and knowledge based on experience become the basis for thoughtful analysis and reappraisal by managements of the plans and programs in which their companies are engaged. The rapidity with which new developments occur and new techniques are devised make planning essential to progress.

Men of prominence in many fields will address the Convention on subjects of primary interest to the industry. Among the topics to be covered by this distinguished group of speakers are atomic power — with emphasis on the role of investor-owned utilities, public attitude toward our industry, management-labor relations, the contribution of electric utility companies to the nation's increasing industrial productivity, and the importance of the industry's fight against socialism.

HARLLEE BRANCH, JR.
President,
Edison Electric Institute

Speakers Listed

Speakers at the first three sessions will include Boyd Campbell, President, Chamber of Commerce of the United States; Gordon M. Freeman International President, International Brotherhood of Electrical Workers; Charles E. Parker, President, Central Surveys, Inc.; Louis V. Sutton, President, Carolina Power & Light Co.; the Hon. Frank T. Bow, Member, United States House of Representatives (Ohio); Dr. F. A. Harper, The Foundation for Economic Education, Inc.; G. W. Ousler, Vice President, Duquesne Light Co. and Chairman, EEI Awards Committee; B. L. England, President, Atlantic City Electric Co.; and Dave Garroway, National Broadcasting Co.

At the final two sessions the speakers will be Alan H. Temple, Executive Vice President, The First National City Bank of New York; J. F. Fairman, Vice President, Consolidated Edison Co. of New York, Inc.; Mark W. Cresap, Jr., Executive Vice President, Westinghouse Electric Corp.; L. R. Boulware, Vice President, General Electric Co.; and the Hon. Frederic R. Coudert, Jr., Member, United States House of Representatives (N. Y.).

Varied Entertainment

A star-studded entertainment program has been planned for the social functions of the Convention, for delegates as well as for the ladies who will attend. A Ladies Luncheon has been scheduled for 12:30 p.m. on Tuesday, June 5, at the Claridge Hotel. Then at 2:30 p.m., Henri Bendel, nationally famous New York couturier, will present a fashion show at the Warner Theatre on the Boardwalk. Sharing the spotlight on the afternoon program will be Cornelia Otis Skinner, who has charmed audiences across the nation.

On Wednesday evening, June 6, through the courtesy of Westinghouse Electric Corp., a special program of entertainment will be presented in the Warner Theatre for all

BOYD CAMPBELL
President, Chamber of Commerce of the United States

Convention registrants and members of their families. The lovely and talented Miss Patrice Munsel, star of the Metropolitan Opera Co. who has been called "Princess Pat of the Met," will present a program of music guaranteed to delight her listeners. The "Dean of Modern American Music," Paul Whiteman, together with his orchestra, will entertain with music which has pleased lovers of popular music through three decades. Buddy Weed, a noted jazz figure currently with the Ernie Kovacs radio show, will be the third star on the program.

Reception a Highlight

The Convention will honor Colonel and Mrs. H. S. Bennion at a reception to be given in their honor on Monday evening, June 4. It will be held in the Carolina Room of Hotel Chalfonte from 5:00 p.m. to 7:00 p.m. Colonel Bennion will retire from EEI as of June 1st after having served member companies of the Institute and its predecessor, National Electric Light Association for nearly 30 years. This social function will be one of the highlights of the entire Convention, as hundreds of utility executives with whom Colonel Bennion has worked during his years of service to the industry take this opportunity to greet him. All persons attending the Convention are invited to this reception.

All of the five General Sessions of the Convention will be held in the Ballroom of Convention Hall. Harllee Branch, Jr., President of the Institute, will preside at the First, Third, and Fifth General Sessions. The Second and Fourth General Sessions will be presided over by D. S. Kennedy, Vice President of the Institute.

First General Session

President Harllee Branch, Jr., will keynote the Convention in his address which will open the First General Session on Monday afternoon, June 4. The electric utility industry has made notable progress in the service it renders customers, in maintaining low cost of services to consumers, and in gaining increased confidence of investors as well as of the general public. Despite these successes, the drive toward nationalized power continues. This indicates that we have still not given the facts to all the people, and it points clearly to the need for doing so in order that the free enterprise system will continue to flourish.

Boyd Campbell, President of the Chamber of Commerce of the United States, will speak on the subject "What's Right With This Country." Positions of responsibility and leadership in business and in civic life have given Mr. Campbell unusual opportunities to experience and observe our nation at work, with the result that he has gained unique insight. He will draw on his rich experience in taking the positive approach to the values in our society in an effort to underscore the basic principles which make for the power and the glory of our nation today.

CHARLES E. PARKER
President, Central Surveys, Inc.

GORDON M. FREEMAN
International President, International Brotherhood of Electrical Workers

"The American Workers' Stake in Free Institutions" will be discussed by Gordon M. Freeman, International President of the International Brotherhood of Electrical Workers. He has found there is a growing realization that responsibilities must be assumed by labor, management and, in fact, all other groups in our nation if we are to sustain our way of life. Mr. Freeman will point out how, in the electric light and power industry, the freedom of labor to contract is largely confined to the investor-owned companies. He will discuss the dependence of workers' welfare upon the successful maintenance of our American institutions of freedom of contract and free enterprise.

Second General Session

The first speaker in the Second General Session on Tuesday morning, June 5, will be Charles E. Parker, President of Central Surveys, Inc. In his talk, entitled "As the Public Sees Us," he will report on public opinion concerning the electric utility industry. Among the points on which he will touch are what facts the public has, and what misinformation; what gaps of unawareness exist; and how the public reacts to conflicting claims and counter-claims. Mr. Parker will report on how we may sharpen our own perception of public opinion, in order to progressively improve the presentation of facts that are winning public approval and support.

About the Speakers:

L. R. Boulware is Vice President—Public and Employee Relations for General Electric Co. He is a graduate of the University of Wisconsin, where he was captain of the baseball team and assisted in commercial law and accounting courses following graduation. Later, he taught in night schools. In World War I he served as a Captain in the Infantry and in World War II was operations vice chairman of the War Production Board, for which he won a Medal of Merit from the President and a Navy Citation. In business, he has been a public accountant, a comptroller in a machine tool plant, a purchasing agent, a factory manager, general sales manager of Easy Washing Machine Co. for 10 years, and general manager of Carrier Corp., Celotex Corp., and GE's manufacturing subsidiaries. In 1947, he was put in charge of GE's employee, community, and union relations and charged with carrying out a new "job marketing" concept. He assumed his present duties in January of this year.

Congressman Frank T. Bow, Republican of Canton, Ohio, is now serving his third term in the US House of Representatives. His legal education was acquired at the Ohio Northern University and its law school. He was admitted to the Ohio Bar in 1923, then entered private law practice. During his varied career he has also been an assistant attorney general in Ohio, news director of a Canton radio station, and a war correspondent in the South Pacific during World War II. In 1947 he went to Washington as general counsel of a committee investigating publicity and propaganda. While with the Harness Committee, he was active in the investigation of the Interior Department and particularly of the Bureau of Reclamation in the Central Valley Project. He was then legislative assistant to Senator Andrew F. Schoeppel of Kansas prior to his election as 16th District Representative in 1950. He has been a member of the Interior and Insular Affairs Committee and is now a member of the Appropriations Committee.

Boyd Campbell, President of the Chamber of Commerce of the United States, began his career in the field of education. He attended a four-month-a year, one-room school in his native Mississippi, and went on to earn an AB degree and an honorary degree of Doctor of Laws from Millsaps College which he has served as treasurer of the Board of Trustees for more than 20 years. Following his graduation, he was principal of Mississippi schools where he discovered the need for a new school supplies business. In 1919, with $250 borrowed on his insurance and $9,750 from friends, he began the Mississippi School Supply Co., which he still heads. Long active in civic affairs, he has been a director of the National Chamber since 1949, a vice president since 1954, and is chairman of its Education Committee and Policy Committee. He is a member of the National Council of the Boy Scouts and a director of the First National Bank, Jackson; Mississippi Power & Light Co., and the Gulf, Mobile, and Ohio Railroad.

Congressman Frederic R. Coudert, Jr., Republican, was first elected in 1946 to represent New York's 17th Congressional District, Manhattan, in the US House of Representatives. He received from Columbia University an AB degree in 1918, a LL B degree in 1922, and its Medal for Public Service in 1941. He is a member of the New York State and Supreme Court Bars and a member of the law firm of Coudert Brothers. In 1924 and 1925, he was assistant US Attorney for the Southern District of New York. He was a State Senator from 1939 to 1946, and from 1940 through 1944 was chairman of the Rapp-Coudert Committee to Investigate Public Education in the City of New York. In the State Senate, he was a member of the Finance Committee, and for the past ten years he has been a member of the House Committee on Appropriations where he has consistently fought waste and unnecessary expenditure by the Government.

Mark W. Cresap, Jr., is Executive Vice President and Deputy Chief Executive Officer of Westinghouse Electric Corp. When he joined the company in 1951, he was a successful management consultant. He was named to his present position in 1955. As co-founder of the management consultant firm of Cresap, McCormick, and Paget, he was asked by Gwilym Price in 1949 to study Westinghouse's sales organization. Subsequent studies for the company resulted in his joining Westinghouse to help in planning the company's development. A graduate of Williams College and Harvard Business School, he joined a consultant firm, Booz, Allen, and Hamilton, in Chicago. From 1939 to 1942 he was merchandising manager of the John B. Stetson Co., then entered the U.S. Army for service in Europe as a Colonel, in charge of administrative management for the Commanding General, Army Service Forces. He founded his own firm in 1946. He is a trustee of Williams College and a member of the planning committee of the State Economy League of Pennsylvania as well as many other civic and planning organizations.

Bayard L. England, President of Atlantic City Electric Co., served as president of the Edison Electric Institute in 1952-53. After graduation from Temple University, he joined Atlantic City Electric in 1922 as a clerk. Subsequently, positions he has held there have included those of distribution engineer, division manager, commercial manager, vice president and assistant general manager, general manager, and director. He was named to his present position in 1948. Under his direction, the company was reorganized in 1949 following its separation from the American Gas and Electric system. He also led the organization of the Southern New Jersey Development Council in 1950. He is a director of the New Jersey and Atlantic City Chambers of Commerce, Miss America Pageant, Atlantic City Convention Bureau, and other civic and charitable organizations. He is a past president of the New Jersey Utilities Association, and a member of the Board of Directors of the EEI.

James F. Fairman, Vice President in Charge of Engineering for Consolidated Edison Co. of New York, Inc., taught engineering for six years at the University of Michigan following his graduation from that school. In 1925 he joined Brooklyn Edison Co. as an engineering assistant. He was the company's electrical engineer in 1936 when he transferred to the parent Consolidated Edison in the same capacity. He became an assistant vice president in 1940 and a vice president in 1945. During 1951 and 1952, he served in Washington as administrator of the Defense Electric Power Administration. He is a past president and now an honorary member of the American Institute of Electrical Engineers, and has served as an officer of the New York State Society of Professional Engineers and of the National Society of Professional Engineers. He is vice president of Atomic Power Development Associates.

Honor to Colonel Bennion

In an address entitled "We Honor a Leader in Our Industry," Louis V. Sutton, President of Carolina Power & Light Co., will present the industry's respects and good wishes to Colonel H. S. Bennion, who retires as Managing Director on June 1st. The Colonel's 30 years of service to EEI and its predecessor, National Electric Light Association, embraces a period in which tremendous advances were made in every phase of the business. Indeed, these advances have greatly changed the daily lives of each of us. Through his association with the industry's leaders over this period of three decades, Colonel Bennion's work and life have become an integral part of this phenomenal progress.

About the Speakers:

Gordon M. Freeman is International President of the International Brotherhood of Electrical Workers. He was initiated into the IBEW in Local 575 in his native Portsmouth, Ohio, in 1913, and served the local in the offices of president and business manager and treasurer prior to appointment to the International staff in 1930. In October, 1944, he was appointed vice president of the IBEW and was unanimously elected to that office at all subsequent conventions. As vice president he presided over the district composed of Kentucky, Maryland, Ohio, Virginia, West Virginia, and the District of Columbia. At the time of the death of the then International president, J. Scott Milne, in July, 1955, Mr. Freeman was elected to that position by the IBEW Executive Committee. He is also a vice president of th Building Trades Department and of the Metal Trades Department, AFL-CIO.

Dave Garroway is "Communicator" of the National Broadcasting Company's five-times-a-week television show, "Today." In addition, he is on weekends the commentator for "Wide, Wide World" on television and for "Monitor" on radio. A 1935 graduate of St. Louis' Washington University and a onetime assistant lab instructor at Harvard University, Mr. Garroway sold piston rings and textbooks before joining NBC's Guest Relations staff in 1937. After attending the network's training school for announcers, he was employed as special events director at KDKA, Pittsburgh, then as an announcer at Chicago's WMAQ. During assignment with the Navy in Pearl Harbor during World War II, he was given permission to do a disc-jockey show in Honolulu, where his casual style of performing was developed. He returned to WMAQ and conducted the middle-of-the-night show, "The 11:60 Club," then "The Dave Garroway Show." His initial television program, "Garroway at Large," led to his assignment to "Today."

Dr. Floyd A. Harper has been an economist with The Foundation for Economic Education, Inc., since 1946. He received his Ph D from Cornell University where he was an assistant and instructor from 1928 to 1934, except for a one-year period during which he was a field agent in research for the Federal Farm Board. In 1934 he was a business analyst, Bank for Cooperatives, Farm Credit Administration, then he became an assistant professor of marketing at Cornell. He was made a professor there in 1935 and retained that position until 1946 except in 1937 when he was acting head at the University of Puerto Rico. He is the author of numerous books, and articles and reports for professional journals. In addition, he holds membership in a large number of professional societies.

George W. Ousler is Vice President of the Duquesne Light Co., where he was first employed in the Engineering Department following his graduation in 1916 from Massachusetts Institute of Technology. His subsequent positions in engineering and sales capacities have included those of director of sales engineering, manager of rates and retail sales, and general sales manager. He was named vice president in charge of sales in 1942. He has long been active in EEI committee work, is now chairman of the Awards Committee. Mr. Ousler is also former chairman of the EEI Commercial Division and a former president of the Pennsylvania Electric Association.

Charles E. Parker is President of Central Surveys, Inc., with offices in Shenandoah, Iowa. His work for 20 years has been largely concerned with public opinion research for companies in the electric power industry.

Louis V. Sutton, a past president of the Institute and a member of the Executive Committee of its Board of Directors, is President and General Manager of Carolina Power & Light Co. A graduate of Virginia Polytechnic Institute, he was employed by General Electric Co. prior to joining Carolina Power & Light as a statistician in 1912. Subsequent to that date but prior to his assumption of his present duties in 1933, Mr. Sutton held positions of increasing responsibility with Arkansas Central Power Co. and with Mississippi Power & Light Co. One of the organizers of the industry's Public Information Program, he is a director and past president of the National Association of Electric Companies, and past president of the Southeastern Electric Exchange.

Alan H. Temple is Executive Vice President of The First National City Bank of New York for which he has supervision over its economic work and its Monthly Economic Letter, which has the largest circulation of any economic publication in the world. A graduate of Columbia University, he was managing editor and editor of "Commerce and Finance" from 1919 to 1931. He was president of Theo. H. Price Publishing Corp. from 1928 to 1931 and financial editor of "North American Review" from 1928 to 1930. He joined National City Bank of New York (now First National City Bank of New York) in 1931, was made vice president in 1941, and became executive vice president in 1952. He is a director of International Banking Corp., Prudential Insurance Co. of Great Britain, Hudson Insurance Co., Seaboard Surety Co., Atlantic Mutual Insurance Co., and Centennial Insurance Co. In addition, he is a member of the Board of Trustees of Committee for Economic Development, National Industrial Conference Board, American Economics Association, and many other professional and civic organizations.

LOUIS V. SUTTON
President,
Carolina Power & Light Co.

THE HON. FRANK T. BOW
Member,
U. S. House of Representatives

DR. F. A. HARPER
The Foundation for
Economic Education, Inc.

Congressman Frank T. Bow of Canton, Ohio, who is now serving his third term in the United States House of Representatives, will be the third speaker at the Tuesday morning session. He will discuss the authority and duty of the executive agencies to set electric rates in accordance with sound business principles, in an address entitled "Sound Business Principles for Federal Power."

"Public Dis-Utilities" is the intriguing title of the address to be given by Dr. F. A. Harper of The Foundation for Economic Education, Inc. He will express the opinion that the world conflict over the nature of public welfare can probably be seen more clearly in the current affairs of our utility industry than on the battlefields of Asia or Europe. He will identify socialism's new challenge to personal rights in the ownership and operation of business. Pointing out why this is such a serious threat, Dr. Harper's remarks will suggest wherein the solution can be found.

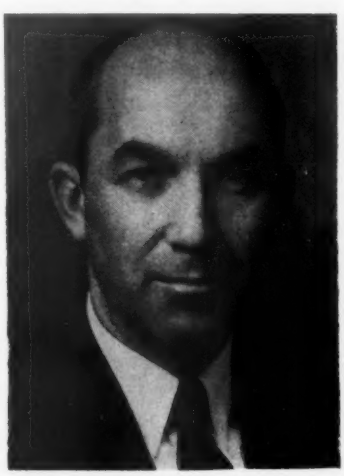
Third General Session

The first item on the agenda for the Third General Session on Tuesday afternoon will be the presentation of the Reddy Kilowatt Annual Report Award and Certificates of Merit. This Award, sponsored by Reddy Kilowatt, Inc., is presented each year to the company whose annual report best simplifies, humanizes, and dramatizes company operations. G. W. Ousler, Vice President of Duquesne Light Co. and Chairman of the EEI Awards Committee, will preside over these presentation ceremonies.

B. L. England, President of Atlantic City Electric Co., will speak on "Service Responsibilities of the Future." The major part which electric power has come to play in every phase of our modern life has created an increasing dependence upon it. The coming all-electric home will add to this dependence. Mr. England will emphasize the belief that the industry's outstanding past record of reliability and dependability, together with its recognition of this responsibility, gives firm assurance that the industry will continue to meet the challenges of increasing industrial productivity in our nation.

Details of the electric industry's multi-million dollar HOUSEPOWER rewiring program will be dramatically presented to Convention delegates and guests by a group headlined by Dave Garroway, star of NBC's television program "TODAY." Supporting Mr. Garroway will be Miss Lee Meriwether, who appears with him on "TODAY," and a group of leading EEI commercial executives. A full explanation of the HOUSEPOWER program will demonstrate its tremendous opportunities in the battle against inadequate wiring, the industry's major obstacle in load building.

GEORGE W. OUSLER
Chairman,
EEI Awards Committee



B. L. ENGLAND
President,
Atlantic City Electric Co.

DAVE GARROWAY
National Broadcasting Co.

ALAN H. TEMPLE
Executive Vice President, The First National City Bank of New York

J. F. FAIRMAN
Vice President, Consolidated Edison Co. of New York

Fourth General Session

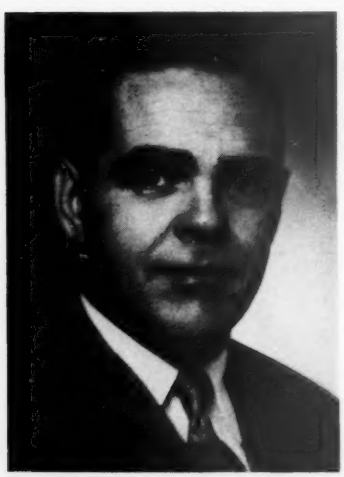
"The Utilities and the Capital Markets," an address by Alan H. Temple, Executive Vice President of The First National City Bank of New York, will open the Fourth General Session. Mr. Temple will review the post-war earnings record of the electric utilities, and relate it to the experience of other industries. The capital requirements of the industry will be surveyed in an effort to determine where the money will come from, what has been happening in the capital markets, and what long-term trends can be discerned.

Atomic energy and public opinion . . . perhaps the two greatest forces in the world today . . . will be the subject of a talk by J. F. Fairman, Vice President in Charge of Engineering for Consolidated Edison Co. of New York, Inc. In his talk, entitled "The Atom and Public Consent," Mr. Fairman will stress that the electric industry has always been dependent on public consent. It is his conviction that as we turn to the use of atomic energy as another fuel, the continuance of this public consent becomes increasingly important. He believes that during the next few years there will be a once-in-an-industry chance to do something about public opinion regarding this new issue.

"Management-Labor Relations," an address by Mark W. Cresap, Jr., Executive Vice President of Westinghouse Electric Corp., will conclude the Fourth General Session. When employees select union representation, management faces the possibility that some day it will come to the bargaining table with objectives which are in irreconcilable conflict with the objectives of the union leaders. The experiences of Westinghouse management in handling just such a problem will be described by Mr. Cresap, in the hope that others may benefit from analysis of their own management-labor relations problem in the light of this company's experience.

Fifth General Session

L. R. Boulware, Vice President—Public and Employee Relations for General Electric Co., will open the Fifth General Session with his speech entitled "How You Can Help the Schools on Your Lines Produce the Engineers You Need." General Electric has had a unique and rewarding experience in trying to help local schools equip teachers and stimulate appropriate studies so that a higher percentage of students will prepare for and pursue science and engineering careers. Mr. Boulware will describe his company's approach to the technical manpower problem and explore its further possibilities.



MARK W. CRESAP, JR.
Executive Vice President, Westinghouse Electric Corp.

L. R. BOULWARE
Vice President, General Electric Co.

"The Federal Budget, Expenditure Limitations and Taxation" will be the subject of an address by the Honorable Frederic R. Coudert, Jr., a member of the United States House of Representatives. He served on the Finance Committee when a New York State Senator, prior to his election to Congress, and for the past ten years has been a member of the House Committee on Appropriations. A vigorous opponent of waste and unnecessary expenditures, Mr. Coudert has introduced and pressed bills designed to make balanced budgets mandatory except in extraordinary circumstances, and to get the government out of business. He is eminently qualified to discuss with us this matter which is of vital importance to our nation and to our companies.

Other speakers at this session will be President Branch, and Donald S. Kennedy, President, Oklahoma Gas and Electric Co.

THE HON. FREDERIC R. COUDERT, JR.
Member,
U. S. House of Representatives

Convention Particulars

Registration for the convention will begin at 12:00 noon on Sunday in the lobby of the Hotel Traymore. Delegates and guests are urged to register as soon as possible after arrival in Atlantic City. The registration fee of $15 will cover attendance at all General Sessions and social functions, and includes all members of the family accompanying the registrant. The complete registration schedule is as follows:

Sunday, June 3

12:00 noon to 6:00 p.m.—Hotel Traymore lobby.

Monday, June 4

8:30 a.m. to 12:00 noon—Hotel Traymore lobby.

11:00 a.m. to 5:00 p.m.—Convention Hall entrance.

Tuesday, June 5

8:30 a.m. to 5:00 p.m.—Convention Hall entrance.

Wednesday, June 6

8:30 a.m. to 5:00 p.m.—Convention Hall entrance.

Convention identification cards for gentlemen and pins for ladies, supplied upon registration, will be required for admission to business sessions and social functions. Tickets, supplied at time of registration, will be required in addition to pins and identification cards for admission to social events.

Attendance at the Convention is expected to be large, and demands for hotel accommodations will be heavy. Delegates who have not yet made application for reservations are requested to do so promptly. Applications, indicating exact time of arrival and date of departure, should be made to A. G. Mingen, Convention Housing Bureau, 16 Central Pier, Atlantic City, N. J.

Through the courtesy of *Electrical World*, the Convention will have its own daily newspaper again this year. The first edition will be available on Sunday. This edition will be remade on Monday to include the roster of Sunday registrants, while other issues will appear on Tuesday and Wednesday. The papers will contain reports of the business sessions, official notices, a roster of the registrants, and other news of general interest.

Transportation

Transportation to Atlantic City is available by airlines, trains, buses, and limousines. Both Eastern Airlines and Allegheny Airlines have several flights each day to Atlantic City. Flights originate from Boston, New York, and Newark, N. J., on the former, and at Cleveland, Pittsburgh, and Washington, D. C., on the latter airline. The Pennsylvania Railroad has eight trains to Atlantic City daily from Philadelphia which connect with points west at the 30th Street and North Philadelphia stations. There is one train direct to the shore resort from New York which leaves at 1:15 p.m.

Public Service Transport and Lincoln Transit Co. operate buses o frequent schedules from the Port Authority Terminal in New York, and similarly good bus service is available from Philadelphia. Door-to-door limousine service to Atlantic City is possible from either New York or Philadelphia. Arrangements for this service can be made by telephoning Cypress 3-4500 in New York, or Belgrade 2-9955 in Philadelphia.

Schedule of Recreation and Social Events

Monday, June 4

5:00 p.m. to 7:00 p.m.—Reception for Colonel & Mrs. H. S. Bennion, Carolina Room of the Hotel Chalfonte.

Tuesday, June 5

12:00 noon — Ladies Luncheon, Claridge Hotel, Edison Electric Institute host.

2:00 p.m.—Ladies Program, Warner Theatre on the Boardwalk. Fashion show, presented by Henri Bendel, and entertainment.

Wednesday, June 6

8:30 p.m.—Presentation of the Charles A. Coffin Award, Warner Theatre on the Boardwalk, and entertainment by Patrice Munsel, Paul Whiteman and his orchestra, and Buddy Weed, presented through the courtesy of Westinghouse Electric Corp.

In commenting on the Convention Mr. Branch recently noted that "I have observed a great quickening of interest in the national problems of the electric utilities . . . There is a growing realization that what affects any part of the industry affects the whole. The program for our 24th Annual Convention will further stimulate this national awareness and national concern. With respect to the subjects to be discussed and to the distinguished speakers who have agreed to participate in our Convention, the program should be a most rewarding one. The Program Committee has done an outstanding job."

(Left to right) Laura McCall Home Service Award winners, Mrs. Ruth Neu, The Cincinnati Gas & Electric Co.; Mrs. Catherine Shank, The Dayton Power and Light Co.; Mrs. Phyllis E. Davis, Atlantic City Electric Co.; Miss Vivian Marshall, New Orleans Public Service Inc., and Evelyn Brockett and Mary Liles, The Cleveland Electric Illuminating Co., are pictured above with Mrs. Elizabeth Sweeney Herbert, who presented the awards on behalf of their donor, McCall's magazine.

Initial presentation of the newly-established Better Light Better Sight Award was made (left to right) to D. E. Bootes for The Dayton Power and Light Co., and H. A. Lawrence for The Cleveland Electric Illuminating Co. by H. A. Stroud, Chairman of the Better Light Better Sight Bureau.

More Power to America Awards were accepted for their companies by F. G. Smith, Jr., Mississippi Power & Light Co.; and R. W. Wyman, The Cleveland Electric Illuminating Co. Carl Runkie represented General Electric Co., who makes the award for contributions to industrial electrification.

Accepting George A. Hughes Awards, presented to their companies for promotion of electric ranges, water heaters, and commercial electric cooking, were (left to right) R. W. Smith, Metropolitan Edison Co.; E. H. Gardiner, Texas Power & Light Co.; Ralph Layfield, Georgia Power Co.; C. W. Ailstock, Florida Power Corp.; R. W. Wilson, Kentucky Utilities Co.; and R. W. Osterholm, Ohio Power Co. The Hotpoint Co., donor of the award, was represented at the presentation by Art Bell.

Industry's Campaigns and Automation Stressed at 22nd EEI Sales Conference

MORE than one-thousand electric company sales executives gathered in Chicago, March 26-29 for the 22nd Annual EEI Sales Conference, held at the Edgewater Beach Hotel, to take a long searching look at industry problems and some of the big campaigns recently instituted to provide answers to these problems. The HOUSEPOWER program, *Live Better . . . Electrically,* and ACTION, and the effects of automation and sales on the future of the electric utility industry all were brought to the attention of the delegates.

Year of Challenge

O. R. Doerr, Vice President of Pacific Gas and Electric Co. and Chairman of the Commercial Division Executive Committee, presided over the General Sessions on Wednesday, March 28, and Thursday, March 29. In opening the sessions, Mr. Doerr called attention to the Conference slogan: 1956 . . . Year of Challenge.

He said, "As we progress in this new era—the electronic, nuclearonic, stereatronic age of automation, with electricity its great prime mover—much basic work remains to be done by all of us. Furthermore, we need to step up the tempo of our activities if we are to reach the ambitious goals our leaders have set for us, and if we are to match the pace setting progress of other dynamic segments of our economy. Thus, this meeting is a call for action."

He noted several activities which, if followed vigorously in the remaining nine months, he said, could make 1956 an outstanding period of accomplishment. National Electrical Week, HOUSEPOWER, *Live Better . . . Electrically,* Operation Home Improvement, and the Electrical Industry Coordinating Group he gave as excellent examples.

Mr. Doerr also paid tribute to the Illuminating Engineering Society which is celebrating its 50th Anniversary this year, "The names of pioneers like Louis B. Marks, Van Renssalaer Lansingh, E. L. Elliott, W. D. Weaver, W. D'Arcy Ryan, and others, together with their early contributions to 'the advancement of the theory of practice of illuminating engineering' will be honored throughout the year," he said.

Harllee Branch, Jr., President of the Institute and President of Georgia Power Co., was the first speaker on the program. In his speech which is printed in full on page 113 of this issue of the BULLETIN, Mr. Branch said, "Today we must sell not only our service but our way of doing business. This we must do not merely to prosper but to survive." He stressed automation as "a child of the electrical age in which we live," and urged that the industry seek out new uses for electricity made possible by automation.

The Institute President also spoke of the necessity of selling the soundness of our free-enterprise system to the American people. Telling of the record of performance as an industry, Mr. Branch commented that it has been so outstanding one would think a sales effort would not be necessary. "The fact is, however, that our opponents have been so much more enterprising than we in the use of various channels of political communication and persuasion that we are far from winning the battle for preservation of the free-enterprise system. We may, indeed, be losing it day by day and hour by hour," he said.

Goals Can Be Reached

Talking on "The Future of The Electric Industry," Fischer Black, Editor and Publisher of *Electrical World,* said, "I do not like to talk in terms of forecasts as such. For our industry, most forecasts are too conservative and that is as it should be. Conservative forecasts are adequate for planning capital expenditures. But in this industry our goals and our results should always be much higher than our forecasts, and goals can be reached if we all work together to make it that way."

As future opportunities for the continued growth of the industry, Mr. Black referred to the following expected growths by 1970: more population growth—40 million more compared with 33 million gain in the past 15 years, which should mean 15 million new customers for utilities and the need for 20 million new homes; a business growth of 56 per cent in real dollars; and an average family income up 25 per cent to a total of $6,700 with most of the added income of $1,100 as discretionary.

Disposable Income Basis

Mr. Black said: "We have found that the annual increase in average residential use is proportionate to disposable income. On this basis we can reach 7,700 kilowatthours per customer in 1970 . . . . With these conservative figures we can easily predict 462 billion kwhr sales to residential customers in 1970 . . . up almost four times compared with five times in the past 15 years. But one does not have to stop there. We can shoot for the stars and get there without too much trouble. We can have 50 per cent more residential load. How? By reaching an annual rate of 1½ million electrically heated and cooled homes by 1970—and doubling the annual increase in lighting that year."

"Again based on disposable income available and the forecasts for Gross National Product, we can project the commercial use for 1970 at 32,000 kwhr per year for the average commercial customer. That is about two and one-half times the 13,000 kwhr use by the average commercial customer today . . . . Today we have 6.1 million commercial customers using 81 billion kwhr. In 1970 we will have 7.6 million commercial customers using 230 billion kwhr," the editor commented.

Referring to an estimated rise of 70 per cent in industrial production expected in the next 15 years, an anticipated addition during the same period of 13 million workers to the nation's total labor force, and the possibility of fewer hours per week of work in 1970, Mr. Black then warned the industry, "By the sale of elec-

(Left to right) The Chairman of the EEI Awards Committee, George W. Ousler, admires the new Lighting Promotion Awards, which were won by Mississippi Power & Light Co. in the residential lighting classification and accepted by E. D. Kenna, Jr., and by The Cleveland Electric Illuminating Co. in the commercial-industrial classification, with acceptance by R. W. Wyman. Three companies are donors of the awards. Their representatives at the presentation were C. A. Burton, Sylvania Electric Products, Inc.; H. E. Plishker, Westinghouse Electric Corp., and J. C. Forbes, General Electric Co.

tricity to industry, you will be expected to supplant 2 to 10 million workers that we will be short that year. Last year, industry was using 18,000 kwhr per worker per year. On a conservative basis, industry in 1970 will be using 32,000 kwhr per worker per year."

"Interpreting this industrial production and kwhr use per worker into industrial power sales, we find that it meant 248 billion kwhr last year and will climb to 570 billion kwhr in 1970," he explained. Because no provision is made for unknown loads like the Atomic Energy Commission installations of the past, new demands of the jet and rocket age for light metals, or for automated plant additions, "the industrial sales in 1970 need not be our conservative estimate of 570 billion kwhr, but more than 1 trillion," Mr. Black said.

Summing up, Mr. Black said, ". . . we have the necessary figures for putting together the total power sales for the industry in 1970 . . . . From total industry power sales last year of 479 billion kwhr, we think we can count on you to be selling 1.3 trillion kwhr in 1970 . . . . But why stop there? Instead of 1.3 trillion kwhr sales in 1970 I believe it is within the realm of possibility to hit a grand total of about 2 trillion kwhr sales in 1970. That is the figure you get if you project the rate of increase for the past 15 years into the future 15 years. Can you keep up the speed?"

HOUSEPOWER Campaign

E. O. George, Manager of Sales, The Detroit Edison Co., led a discussion of the HOUSEPOWER program. "HOUSEPOWER is a comprehensive advertising and sales promotion effort, forged to help break the inadequate wiring bottleneck," he said. Mr. George described the campaign as one which "will support and assist present rewiring programs—not conflict with them."

He said: "HOUSEPOWER is not a certification program. It is a national rewiring program. Its objectives are simple: to mass-educate homeowners on adequate wiring; to stimulate consumer action and get at least 20 million homes rewired in the next ten years; to assist and support other programs having the same objectives."

"To put the HOUSEPOWER theme to work, we have a five part program," he added. "Part one is advertising in *Better Homes & Gardens*. From May through November there will be 16 pages of advertising. Each month, *Better Homes & Gardens* will reach 6½ million readers. The purpose of this basic series of advertisements is to mass-educate homeowners reached by *Better Homes & Gardens* on the problems of inadequate wiring and, specifically, to educate them on the benefits of having full HOUSEPOWER."

Tom Ayers, Vice President, Commonwealth Edison Co., told of the $100,000 "How's Your HOUSEPOWER?" consumer contest. "This contest will help force readership of the HOUSEPOWER story, and, more important, will supply quality sales leads for action by local utilities, electrical contractors, and dealers. It will speed up the educational process of rewiring . . . will get readers to think about their home wiring problems," he said.

Mr. George then discussed newspaper advertising for the program. He told the conference, ". . . local identification will permit homeowners to think in terms of *your* company when they wish to take action. Local newspaper advertising gives you the flexibility you need to adapt the HOUSEPOWER program to your pattern of activity and to tie-in local industry allies. Local newspapers could easily double or triple the coverage of our campaign in *Better Homes & Gardens*. We want as many entries in this contest as possible, because from these entries we will not only obtain usable sales leads but they will

make more people aware of their wiring problems and educate them on the HOUSEPOWER story."

Mr. George pointed out that it had been necessary to set aside previously announced plans for local tie-in advertising in syndicated Sunday supplements because of the disparity between supplement coverage and the needs of member companies.

"Instead, each company will be expected to devise its own local program tailored to fit its own local problem," he explained. "From May 1st through September 30th, during which time the contest will run, each utility should run a good sized ad every two weeks promoting the HOUSEPOWER contest."

George W. Ousler, Vice President, Duquesne Light Co., discussed the television phase of the program. Two nation-wide television shows — TODAY and HOME—will be used starting at the end of September, at which time the contest will have been concluded and a means will be needed of sustaining and heightening interest in the program. They will also bring sustained coverage of over ten million homeowners with two great sales personalities working for us, he said. The shows will reach over two million homes every day, four days a week and will give more than ten million viewer-impressions per week. "During our 13-week participation TODAY and HOME will have exposed over 70 per cent of the total homes in the United States to the HOUSEPOWER story," Mr. Ousler said.

As aids to local companies, Mr. George told the group, "Local promotion materials in quantity and supplied at cost will be available through Edison Electric Institute to help you activate the program in your service area." He said, "This local promotion segment is of the utmost importance. We must take advantage of the national mass-education advertising that will be seating the HOUSEPOWER name and idea by supporting and selling at the local level with all the forces and materials at our disposal. When this is done, we are just beginning to crack the wiring bottlenecks . . . just beginning the tremendous job ahead of us . . . just beginning to reap the rewards offered by the vast, untapped rewiring market."

Awards Luncheon

A new feature this year was the General Awards Luncheon at which the annual awards for outstanding promotional activities by electric utilities were presented. George W. Ousler, chairman of the Awards Committee of EEI, was in charge of the program.

The winners of the Laura McCali Awards, offered to give public acknowledgment to outstanding home service work were The Cleveland Electric Illuminating Co. in Division A (for large home service operations), New Orleans Public Service Inc. in Division B (for small home service operations), and Mrs. Ruth Neu, The Cincinnati Gas & Electric Co.; Mrs. Phyllis E. Davis, Atlantic City Electric Co., and Mrs. Catherine Shank, The Dayton Power and Light Co. in Division C (for three members of Home Service Departments, of any size, for individual achievement).

The new Lighting Promotion Awards for lighting sales promotion, an outgrowth of the Planned Lighting Awards, discontinued in 1955, went to Mississippi Power & Light Co. for residential lighting promotional activity and The Cleveland Electric Illuminating Co. for commercial-industrial activity. These awards are given to recognize outstanding lighting promotional activities in the two markets.

The Cleveland Electric Illuminating Co. and Mississippi Power & Light Co. were Division A and Division B winners in the More Power To America Award contest. The award is offered by the General Electric Co. to increase the productivity of American industry by encouraging creative, broad-scale industrial electrification among America's operating electric light and power companies and to bring recognition to the companies and individuals making the greatest advancement in this field.

The new Better Light Better Sight Bureau Awards for lighting education were presented to The Cleveland Electric Illuminating Co. in Division A and The Dayton Power and Light Company in Division B. Sponsored by the Better Light Better Sight Bureau, they are offered to operating electric light and power companies to recognize noteworthy educational activities which foster a better under-

(Left to right) George Westinghouse Awards were accepted by R. W. Smith, Metropolitan Edison Co., whose company won second place, and O. R. Williamson, Kentucky Utilities Co., whose company won first place. Presenting the awards for Westinghouse Electric Corp. was J. D. Lee.

(Left to right) George W. Ousler, Chairman, EEI Awards Committee, looks on as Dwight Garber accepts the Thomas W. Martin Rural Electrification Award for The Dayton Power and Light Co. from E. A. Wilson, who made the presentation on behalf of the donor, Alabama Power Co.

standing of the relationship of light and sight.

First and second prize winners of the George Westinghouse Awards were Kentucky Utilities Co. and Metropolitan Edison Co. The awards are given to provide recognition and stimulate outstanding performance in the promotion of electric laundry equipment.

Frank Watts Awards went to New York State Electric & Gas Corp., Alabama Power Co. and Wisconsin Electric Power Co. Three equal awards, they are given to recognize promotional and sales efforts in rural areas and to encourage interest in the use of electrically-operated farm equipment as a means of improving agricultural productive efficiency.

The Dayton Power and Light Co. was named winner of the Thomas W. Martin Rural Electrification Award, given to the company making the greatest contribution to electrification and agricultural advancement in the area it serves.

The George A. Hughes Award for outstanding achievement in the field of electric appliance sales and promotion, with a view to the development of the electric cooking and water heating loads, were announced as follows: in the Electric Water Heater Activity, Division A, Ohio Power Co., and Division B, Florida Power Corp.; in the Electric Range Activity, Texas Power & Light Co., Division A, and Metropolitan Edison Co., Division B; the Commercial Electric Cooking Activity, Division A, Georgia Power Co., and Division B, Kentucky Utilities Co.

(Left to right) EEI Awards Committee Chairman George W. Ousler is pictured with winners of the Frank Watts Awards. Holding awards presented to their winning companies are Ralph Bowen, Wisconsin Electric Power Co.; L. H. Hammond, New York State Electric & Gas Corp.; and M. B. Penn, Alabama Power Co. Elliott Odell bestowed the awards for Farm Journal, Inc., donor.

Live Better . . . Electrically

First speaker on the Wednesday afternoon General Session was W. V. O'Brien, Vice President of General Electric Co. speaking on the *Live Better . . . Electrically* program. He pointed out that there is no duplication between this program and the HOUSEPOWER program, both of which are badly needed and can and should be employed to the full by every utility. "The challenge that these programs present to you lies in the fact that the success of both is largely up to you—to the way in which you put them to work for your companies," he said.

"To meet the severe competition for the consumer dollar that exists today—to bring the trend of residential kilowatthour sales growth up to its accustomed position at the head of the parade of your services—we need to sell the benefits of electrical living more intensively than we've ever done," Mr. O'Brien said. "And the *Live Better . . . Electrically* program is designed to do just this job for our industry. It will sell the benefits of electrical living first, through a broad national umbrella of advertising that will tell a basic story of electrical living benefits; second, by providing the promotional advertising tools needed for effective tie-in with the national program by utilities, distributors, dealers, contractors, and others."

"The big news of the moment, so far as the *Live Better . . . Electrically* drive is concerned, is the consumer kick-off, with an extensive national advertising campaign. For the first time in our 77-year history, we'll be selling electricity, with a big league national advertising program."

Showing that the program presents wiring as the vital element needed to make electrical living possible, the *Live Better . . . Electrically* program is intended to help this industry promote the benefits of electrical living, Mr. O'Brien stated. "If we promote these benefits with sufficient skill and vigor, our customers will buy more of the appliances and equipment that provide these benefits. And, if we really sell the benefits, they will also be more willing to invest in the wiring that permits the equipment to do its work efficiently. People who have been thoroughly sold on the benefits offered only by electrical living can be encouraged to accept the comparatively minor, but necessary extra investment in adequate wiring, as well as the cost of using more electric service. The *Live Better . . . Electrically* program will help you to sell those benefits, through advertising and promotional aids," he said.

"Your sales effort will be backed, for the first time in history, by a national advertising program that is working for you and your local industry allies—that is designed to sell not brands, not gadgets on appliances, but the idea of living better . . . electrically," Mr. O'Brien concluded.

Management's Expectations

Speaking on "What Management Expects Of The Sales Department," J. W. McAfee, President, Union Electric Co. of Missouri, pointed out the basic objectives of electric utility sales work: (1) to produce the maximum volume of profitable sales with the lowest possible budget; (2) to service those sales in such a way as to obtain full customer satisfaction; (3) to obtain from the many customers and public contacts that are peculiar to sales work facts and ideas which can be constructively used in advertising and public relation programs; (4) to instill throughout the organization sales consciousness and to stimulate a concerted effort for financial success. Mr. McAfee's speech will be printed in full in the May issue of the BULLETIN.

Frank W. Lovejoy, Socony Mobil Oil Co., New York, then gave an entertaining and stimulating talk, "The Price of the Rest is Always All the Rest."

Harold H. Young, Eastman, Dillon Co., New York, speaking at the Thurs-

day morning session on "What Does The Investor Expect From His Electric Utility Investments?" said, "Stockholders like to feel that their company is doing aggressive promotional work. Average usage per residential customer is one of the best indexes. Informed investors recognize that this varies in different parts of the country, especially depending on the type of gas competition, but the figure does tell a story especially as relating to national trends. The question of 'to merchandise or not to merchandise' is not lightly settled but if the answer is 'no' investors would like to feel the company is doing all it can to get appliances on its lines.

"Probably the principal interest of investors in utility stocks is in good dividends and in the prospect for higher dividends. Utility stocks do not provide a vehicle for larger capital gains so investors like to think of the prospects of higher dividends as giving some measure of protection against inflation and providing modest enhancement in value.

"With eyes on opportunities for higher earnings and higher dividends, investors are sensitive to growth prospects of companies and the territories they serve," he commented.

"Investors like to be kept well informed about their security holdings. A company should prepare interesting and informative annual reports and quarterly reports. Furthermore, it is desirable to release from time to time additional and supplementary information to the financial press, statistical services, institutions and dealers particularly interested in the company," he further said.

Mr. Young also pointed out: stockholders like to feel a company is operating in a favorable regulatory atmosphere—the investing public is more sensitive and better informed in this respect than might be generally believed; investors like to feel rates are right—they like to feel rates are not out of line on the high side, especially in direct comparison with neighboring companies and also high enough to give the investor a fair return, and they like to feel management is on the alert to go after higher rates if they are justified and are necessary to produce a fair return; investors like to feel companies are good citizens of the territory where they operate.

"A very pressing problem which should receive more attention from the sales-minded officials of the utility companies is the servicing of appliances. The utility companies cannot hope to keep selling appliances and equipment if people are going to be unhappy after the equipment gets into their home," he cautioned.

Automation Benefits

"Who Benefits From Automation?" was the title of the talk Gwilym A. Price, Chairman and President of Westinghouse Electric Corporation, gave before the Conference. Pointing out that there are at least fifty-six definitions of automation, varying from "continuous automatic production" to "use of automatic handling and automatic control to replace manual handling and control in manufacturing" he said his purpose was to ask that a policy be adopted and an action taken.

"Automation desperately needs interpreters and defenders; no single American Industry is so well fitted to assume this responsibility as the electrical industry and no segment of the electrical industry is better able to fill the role of spokesman for automation than those at the Conference," he said. "I propose that our industry work openly to promote automation, to answer those who misrepresent it, and to explain its benefits patiently and ceaselessly to those who stand to gain the most from it — the American people."

Residential Load Building

Edwin Vennard, Vice President of the Institute, spoke on "A Ten Year Residential Load Building Program," a paper he had prepared while president of Middle West Service Co. After outlining his forecast of residential sales under normal trends for the next ten years, he presented a target sales program designed to increase both volume and load factor. He discussed over-all economic factors, electric utility trends, residential sales programs—normal trends and targets, pricing to encourage sales, and amount we can afford to spend on load building.

"Air conditioning is having such an important effect on systems load we should examine it and plan our sales programs accordingly," Mr. Vennard noted.

"With all the benefits and values of electricity we should not be content when we are obtaining only 1.2 per cent of the customer's disposable income. What a challenge to the Sales Department!"

Speaking of what he called "The Phantom Appliances," Mr. Vennard said, "We have been developing new appliances at the rate of 1.5 a year. In ten years we will be using new appliances we don't even know about now. They will contribute a sizeable block to the national kilowatthour growth."

Wise Sales Planning

While residential sales may seem large Mr. Vennard pointed out they are not as large as they could be if all companies engaged in sales promotion as actively as some companies. "Since we have caught up on capacity many companies have redesigned their sales programs and have stepped them up to increase volume. Most of these companies are designing their sales effort to strike a reasonable balance in sales. Some call it 'selective selling' or 'load molding.' Others say they are building load factor. Whatever it is called it is simply a matter of wise sales planning. We want to keep the price of electricity as low as we can to bring about the most widespread use of our service and still leave satisfactory earnings to attract new capital. This requires scientific planning," he said.

"Our purpose in selling is to improve earnings. Earnings are a function of sales and rates. If rates are below cost we will decrease earnings, as expressed in per cent return on investment, with increased sales. If rates are below cost we should take steps to correct them. This is especially true of the bottom steps of residential rates. These should be raised to the proper level even though we may have to give up an equivalent number of dollars now in some classes of service where we have a better margin."

Discussing spending for load building, Mr. Vennard pointed out that the amount we are spending, while increasing dollar-wise, has declined percentage-wise from 1937 average. Calculations show that when we spend 2.5 per cent of gross revenue, on a balanced sales program, we increase our gross revenue, net revenue, and return on common stock—after tak-

ing into account the *increased* sales expense and after allowing a 6 per cent return on the *increased* investment. Some companies can spend and are spending, profitably, more than 2.5 per cent of gross revenue. "In other words," he said, "this program will result in an increase in the industry's over-all rate of return, provided always that the rates are at the proper level."

ACTION Program

The final speaker for the general sessions was Elmer L. Lindseth, President, The Cleveland Electric Illuminating Co. who said, "Far too many of the homes in this nation are rapidly becoming unfit to live in." As the solution to this problem, Mr. Lindseth titled his talk, "It'll Take ACTION."

The American citizen must be sold on the need for protecting his investment in his home, Mr. Lindseth said. "Now, for the first time, that selling job is being tackled on a nationwide basis." ACTION — The American Council To Improve Our Neighborhoods—is doing this job, Mr. Lindseth pointed out. For publicity media he mentioned magazine ads, articles, newspapers, radio, and television, and the full endorsement of the Advertising Council. "In fact, ACTION is using all the channels of mass communication in its all-out effort to strike a spark in the conscience of the American home owner," he said.

Referring to Cleveland's efforts, Mr. Lindseth told of "Operation Demonstrate," a concerted effort by Cleveland industry and civic groups to do something about housing rehabilitation.

"My own company had several practical incentives for joining Operation Demonstrate," he said. "We are, like most electric utilities, the largest taxpayer in our community. Since we invest in the community so heavily, we feel it is only prudent to do anything we can to protect that investment. Also, a thirty, forty or fifty-year-old home which has been neglected is a home with low electrical living standard.

"But our industry cannot accomplish miracles singlehandedly," he said. We will do well to put our wiring problem in the same hopper with the other housing problems—obsolete plumbing, sagging floors, unpainted wood, leaking roofs, run-down neighborhoods. Only then will we maximize our efforts by integrating them with what is being done in those other fields. Our opportunity to do that lies in ACTION."

ACTION needs three things: financial support, publicity, and local leadership, he pointed out.

"Should we in the electric utility industry care whether ACTION succeeds?" he asked. He gave three reasons why it should: "as citizens we stand to share in the tremendous benefits that will accrue to America as a result of ACTION; as an industry we stand to gain tremendously, market-wise and dollar-wise, from the resulting upsurge in electrical living standards."

Russian Farms

Herbert Pike, of Whiting, Iowa, one of the 12 farmers who made a trip to Russia last year, was the speaker at the Farm Luncheon on Tuesday, March 27.

"I think it is very important that we try to keep on speaking terms with another great world power like the Soviet Union if we possibly can," he said.

"One encouraging thing was the attitude of the people themselves. Despite anti-American propaganda, we found the people friendly, and curious to see Americans, and learn more about America. I think the people are a hard-working lot and, given a chance, very capable."

Speaking of the Russian agricultural system, Mr. Pike commented, "They are not getting as much total production as they should and not nearly as much production per man as we get with our system of family farms in this country. American agricultural efficiency is largely due to the freedom of initiative which the individual farmer has. He has an incentive to produce and has a minimum of supervision from the government or anyone else."

Committee Meetings

On Monday, March 26, the Institute's committee held meetings. Tuesday, the Commercial, Farm, Industrial, and Residential and combined Commercial-Industrial and Residential-Farm Groups held morning and afternoon sessions.

In addition, there were four special events: the Home Service Breakfast on Tuesday at which Mrs. Jean Wade Rindlaub, Vice President, Batten, Barton, Durstine, Osborn, Inc., spoke on "You—In A Changing World"; the Farm Luncheon on Tuesday at which Mr. Pike spoke; a PUAA Luncheon, also on Tuesday, featuring Mr. Jules Herbuveaux, Vice President, National Broadcasting Co., Chicago, speaking on "The Two Sides of Television," and the General Luncheon Session on Thursday noon at which Dr. W. H. Alexander, of Oklahoma City, Oklahoma, was the featured speaker.

Herman Russell

Herman Russell, 77, Chairman of the Board of Directors of Rochester Gas and Electric Corp. and President of the firm from 1929 to 1947, died March 14, 1956, at his home in Rochester, N. Y.

Mr. Russell had been with RG&E since November 19, 1905, when he was hired as an engineer in the Gas Department. He was made superintendent of the department less than a year later and became assistant general manager in 1914. In 1919 he became general manager, and was named a director in 1922, vice president and general manager in 1923, and president in 1929.

On his 75th birthday, a little more than two years ago, Mr. Russell threw the switch opening a new unit of RG&E's Russell Generating Station, which was named in his honor in 1949.

Mr. Russell was born September 21, 1878, in Manistee, Mich. He attended schools in Manistee and received a bachelor of science degree from the University of Michigan in 1898 and a master of science degree in 1900.

His first job was that of cadet engineer with the Detroit Gas Co. Mr. Russell gained further experience as superintendent of the Gas Manufacturing Department of the San Francisco Gas & Electric Co. in 1903-04, then worked in Cincinnati for another utility firm before joining Rochester Railway & Light Co., predecessor of RG&E.

He was one of the founders and a trustee of the Institute of Gas Technology, now located in Chicago, and held membership in many industrial organizations. He was a director of Lincoln-Rochester Trust Co. and Rochester Institute of Technology.

Ours Is a Selling Job

By Harllee Branch, Jr.
President, Georgia Power Company and
President, Edison Electric Institute

An address before the 22nd Annual EEI Sales Conference, Chicago, Illinois, March 28, 1956

IT is sometimes overlooked that salesmanship—no less than engineering and scientific genius—has been responsible for America's amazing electrical progress.

Thomas A. Edison, the founder of our industry, was a salesman—a news butcher—before he became an inventor, and throughout his remarkable career he displayed an extraordinary instinct for selling. Edison was no mere abstractionist and tinkerer. He realized, as few men have realized, that in order for electricity to really become a useful servent of mankind—in order for it to pass from the stage of laboratory experimentation to practical application—the public had to be "sold" on it. He described the type of selling he had in mind as "commercialized education." In his later years he spoke of the indispensable role which this educational effort played in launching our industry and in promoting its development. He said:

> "Our fathers were not equipped mentally to grasp or to utilize the order of things which burst upon them. Many of them did not seem to know at first what it was all about. If modern industry and invention expected to have a market for its products it had to turn schoolmaster on an elaborate scale. It had to educate the world before it could sell the world. It had to show men how to think a little farther and a little faster before it could expect to interest them in how to buy. It was necessary to create an understanding and appreciation of a higher standard of living . . . and then a desire for it . . . a demand to get more out of life on the part of several million individuals who would have been entirely satisfied with what they had . . . The educator had to follow the inventor . . . We may term it commercialized education, . . . but it has made its results felt."

Because Mr. Edison and his early colleagues had a "will to sell," as well as a talent for invention, Americans have enjoyed the blessings of electricity to a degree unmatched by any other people in the world.

But, the job is hardly begun!

Today—when I contemplate the many attractive and ever compelling bids being made for the consumer's dollar—when I think of the swiftness with which technological changes are taking place and will continue to take place, and the myriad ways in which new discoveries are being translated into commercial products and services—when I note the billions of dollars being invested in new and expanded facilities by the electric industry, and when I recall that the only orderly and sound way in which these facilities can be paid for and made really serviceable is by keeping our customers abreast of the newest and most efficient uses of electricity, I am convinced that as never before, the future of our industry depends on vigorous, sound and selective selling.

Today we must sell not only our service but our way of doing business. This we must do, not merely to prosper but to survive!

Two Important Factors

In a very brief and non-technical way I should like to consider with you two factors which I think will affect our industry in the months and years immediately ahead and which we should have in mind as we formulate our sales programs. One is "automation," and *the other is the almost shocking indifference of some Americans regarding the preservation of our free-enterprise business system.* These two things not only will influence all of our future business decisions but they should be given especially careful consideration as we set up programs for future sales emphasis.

We are hearing a great deal about "automation" already and we will hear even more about it in the future. Automation has been defined as the "use of machines to run machines," and one writer has said that "automation is the technological revolution of the second half of the 20th century just as mass production was of the first half."

It should be remembered that automation is peculiarly a child of the electrical age in which we live. While other forms of energy may be used in place of electrical energy in some applications such as heating and motive power, electricity is the single force suitable for operating the control devices which make automation possible.

Mr. Edison envisioned the need for increased automation many years ago even though the professors and news writers had not yet dreamed up a name for it. In 1926 he urged a more rapid and universal substitution of electrical energy for human energy in these words:

> "We must substitute motors for muscles in a thousand new ways. A human brain is greatly hampered in its usefulness if it has only the two hands of a man to do its bidding. There are machines each of which can do the work of a multitude of hands, when directed by one brain. That is efficiency. Anything which tends to slow work down is waste. Every effort should be made to speed work up. Increased production means enlarged lives for mankind. Human hands alone can do no more than they did long ago by way of fast production. Only machines, not nerves and muscles, can increase men's output. We have scarcely seen the start of the mechanical age, and after it is underway we shall discover that it is also such a mental age as never has been known before."

You will note that Mr. Edison saw in the substitution of mechanical power for human effort a boon for mankind and not a Frankenstein such as some present-day prophets of doom would predict. He saw that, while automation would replace some workers, nevertheless it would only release them for the many new tasks required to keep up with a constantly increasing population and a constantly rising standard of living. I am sure

he saw also that automation inevitably would generate a demand for greater skills and a higher pride of craftsmanship among our people. That result is becoming increasingly obvious today as the demand for better-trained technicians becomes more clamorous. A scholarly observer has declared that "whereas mass production upgraded the unskilled laborer of yesterday into the semi-skilled machine operator of today, automation will upgrade the semi-skilled machine operator of today into the highly-skilled and educated technician of tomorrow, multiplying his income in the process."

Another has noted that, "automation, if management is alert to its broader potentialities, will lead to the *human use of human beings*, that is, to the greater use of man's specifically human qualities—his ability to think, to analyze, to decide."

Early Industrial Application

From the beginning of our industry more than three-fourths of a century ago we have applied electric energy more and more to the substitution of machine labor for human labor. As a result in American industrial plants a manufacturing worker already uses an average of 16,841 kilowatthours of electric power a year. This is equivalent to the energy of 250 men working with him on his job.

In the office, at home, and on the farm, electricity has already displaced human drudgery in dozens of applications. Now comes automation to further lighten the burden of toil and to multiply man's productivity.

Automation is not simply a project for the future. It is already a big factor in American industrial processes and will become an increasingly important one.

According to *Time* Magazine of March 19: "Of the $720 million spent by the oil processing industry in 1955 for capital improvements, 15 per cent went for automation.....The American Society of Tool Engineers reported that automation will account for 18 per cent of metal workers' equipment orders this year. In the aircraft industry one-fifth of all money spent for equipment this year will go for push-button machines; one-third of the auto makers' 1956-7 equipment orders will be invested in automation. Among the items on U.S. industry's automation shopping list: 25,000 welding machines, 55,000 grinders and finishers, 200,000 machine tools....."

Automation will pave the way for more and more uses of electricity. It is our duty to aggressively seek out these new uses. We must not sit by and wait for others to develop them. It is our duty also to see that bottlenecks—such as inadequate wiring—are cleared away. This the industry is seeking to do through its "HOUSE-POWER" and "Live Better...Electrically" and other similar programs. Finally, as members of an industry which prides itself on its humanistic as well as its commercial contributions, I think we have a responsibility to see that human values are enhanced and not jeopardized by the move to increased mechanization. These human values can be preserved and improved and, as community leaders, we must see that they are. My plea here is for the sort of constructive citizenship which will make our industry truly valuable to mankind and therefore worthy of public support.

Selling Free Enterprise

That brings me to the second of our selling jobs—one which I have felt it obligatory upon me to keep constantly before all segmants of our industry as I have traveled around the country this year for the Edison Electric Institute. *It is the job of selling the soundness of our free-enterprise system to the American people.* This includes, of course, selling our way of doing business to our customers, to the investors who supply the billions of dollars required each year for the expansion and improvement of our facilities, and to the regulatory agencies which supervise our operations. But, over and above these obvious obligations, we have the broader duty of selling the voters and their political representatives on the advantages of the free enterprise system as contrasted with socialized or governmentalized electricity.

The Battle for Preservation

Our record of performance as an industry has been so outstanding that one would think such a sales effort would not be necessary. The fact is, however, that our opponents have been so much more enterprising than we in the use of various channels of political communication and persuasion that we are far from winning the battle for preservation of the free enterprise system. We may, indeed, be losing it day by day and hour by hour.

It can be demonstrated, for example, that while the investor-owned companies have consistently met their obligations to keep the power supply ahead of the demands of their customers, those areas which are dependent upon the Federal government for their electric service have been subjected to one power shortage after another. Why is it, then, that the cry of "power shortage" has been successfully used to promote government power expansion instead of as a criticism for government power failures?

The Hon. Len Jordan, Chairman of the United States Section of the International Commission and former Governor of Idaho, said in a recent address: "For 20 years, first in the Tennessee Valley and later in the Pacific Northwest we have drifted, and at times almost galloped, toward a Federal monopoly in water resource development, toward a philosophy that the Federal government had an obligation to supply the electric power for these regions....In support of this philosophy there has evolved a school of thought whose disciples believed that the Federal government can meet this situation bigger, better, quicker and cheaper than anyone else. History has demonstrated that in these areas where a Federal monopoly exists the region lives from one crisis to another, from one power shortage to another, depending upon the whims of an always reluctant Congress to provide money for additional power. Such areas live in a perennial power shortage."

Myth Firmly Implanted

In spite of our record of performance, as against the government's record of "too little and too late," the myth of "abundant power" from government hydroelectric projects is firmly implanted in the minds of many American citizens who have no suspicion that they are being duped. The public must be educated to the falsity of this claim.

The legend of "cheap" government power is just as widely believed, and this, too, in the face of a splendid record of performance by the electric industry. In spite of the rising costs of government (70 per cent in terms of Federal tax rates alone), and of increased prices for every other ser-

vice and commodity, *electricity cost less per kilowatthour today than it did ten or even 20 years ago.* As you know, the average price per kilowatthour for residental electric service decreased from 7 cents in 1926 to only 2.64 cents in 1955.

Underpriced Electricity

There is no such thing as *"cheap"* government electricity. There is only *underpriced* government electricity. Last year, for example, the investor-owned electric companies and their customers paid more than $1.6 billion in taxes. Federal income taxes alone exceeded $1 billion for the first time in our industry's history. The remaining $600 million plus was paid to state and local governments.

These levies took 23.6 cents of every dollar our customers paid in their electric bills. No Federal project pays any income tax and only two, TVA and Hoover Dam, make any payments in lieu of local taxes. If the subsidized power operations had been taxed on a basis comparable to what the electric companies have to pay, Federal and local tax authorities would have received about $400 million in revenue which they did not receive because of this tax immunity.

Power from Federal projects which is arbitrarily sold to certain privileged groups under the preference provisions of Federal statues is further subsidized because the cost of money to the Federal treasury is generally understated in computing fixed charges; because of an unjustifiably large allocation of costs of hydro-electric projects to navigation, flood control, and other non-reimbursable features and a consequent understatement of the investment in power generating facilities.

Admiral Ben Moreell, Chairman of the Task Force on Water Resources and Power of the Hoover Commission, said recently: "The Task Force concluded that if all Federal power rates had been based on power values computed in accordance with methods prescribed by the Federal Power Commission, the rates would be increased 30 to 50 per cent and the government would have received $130 million more in power revenues in 1953 alone."

The sales organizations of our companies have a big job laid out for them. I am convinced that the selling of ideas is even more important than the selling of electricity. It will not matter much to us if the average residential use of electricity in America increases to 6,000 kilowatthours a year or 8,000 kilowatthours a year if, in the meantime, the business has been taken over by government.

An Earnest Suggestion

May I close with this simple but earnest suggestion: Seize every opportunity for impressing upon the people of your communities the fact that the American standard of living was created by the free enterprise system, that the electric industry is a large and indispensable part of this system, and that whatever endangers a part of the system endangers the whole.

It seems to me that we stand at a particularly critical point, in view of the role which atomic energy will soon play in the production of electric power, and the persistent efforts being made to use this new technology as a means of creating more and more preference and subsidies for the governmentally-financed and/or governmentally-owned power organizations.

The next few years will show whether we have the sort of "will to sell" which Mr. Edison urged us to develop.

75th Anniversary of Founding Celebrated by The Cleveland Electric Illuminating Company

A group of 450 supervisors of The Cleveland Electric Illuminating Co. attended a "birthday party" on March 13 commemorating the 75th anniversary of the company's founding.

The dinner meeting, held at Cleveland's Hotel Carter, was duplicated the following evening for 350 Illuminating specialists.

Elmer L. Lindseth, President of the company, reviewed major events of the past 75 years with the help of photographs extending back to March 15, 1881. It was on that date, he pointed out, that a small group of Cleveland civic leaders, headed by electrical pioneer Charles Francis Brush, formed the "Brush Electric Light and Power Co." for the announced purpose of "introducing the electric light into use in Cuyahoga County."

"Far-sighted as he was, Charles Francis Brush could scarcely have foreseen," Mr. Lindseth said, "that his little company, capitalized at $150,000 and originally serving just 50 customers, would within three-quarters of a century have a property and plant investment of $414,000,000; 33,000 stockholders; 4500 employees; and over 500,000 customers.

"Actually, however, size is significant only as an index of community service. Ours is entirely a service business, and our progress can properly be measured only in terms of the service we render.

"It is for this reason that we at The Illuminating Co. take particular pride in the part we have been privileged to play in fulfilling the historic pledge of Thomas A. Edison: 'We'll make electricity so cheap that only the extravagant will burn candles.' In Northeast Ohio today, electric light is 1300 times cheaper than the equivalent amount of candle light."

Ralph M. Besse, Executive Vice President, emphasized that the Age of Electricity is still in its relative infancy.

"It seems incredible," he said, "that electricity, discovered over 2500 years ago, has been commercially available only since 1881, and that more than half of its practical development has come in the past decade, since the end of World War II.

"Who knows that what we have now done can be considered even a good start toward the infinite possibilities ahead?

"The tremendous growth of our industry and our company represents the power of an idea, and the triumph of a force which has completely transformed life in America and throughout most of the world. Electricity has created literally millions of jobs, made possible incredible feats of production, revolutionized medical science, added hours of leisure to people's days and years to their lives.

"But great though the past has been, the future holds still greater promise.

"We firmly believe that Northeast Ohio is now entering its period of greatest growth. And I am confident that The Illuminating Co. will grow as much in the next ten years, both in size and in service to the community, as it has in the past 75."

Present Status of Atomic Power

By Walker L. Cisler
President, The Detroit Edison Company

An address before the Twenty-Third Annual Conference of the Southeastern Electric Exchange, Boca Raton, Florida, March 13, 1956

IN considering the present status of atomic power, it may be well for us to recall that it was not until 1939 that the actual fissioning of the uranium atom was first demonstrated. Three years later—in December, 1942—the first chain reaction was accomplished. These were the real beginnings of atomic power.

Because of world conditions, the first developmental efforts which followed the discovery of nuclear fission were intensively directed toward military uses of this new form of energy. These efforts were climaxed in August, 1945, when the world's first atomic bomb fell on Hiroshima.

Atomic Energy Act

Consideration of peaceful uses of atomic energy began in 1946 with the enactment of the Atomic Energy Act and the establishment of the Atomic Energy Commission. Thus, active development work in atomic power started only ten years ago.

Much of a fundamental character has been accomplished during the intervening ten years. The Commission has established large, well-equipped National Laboratories to carry on research and development work in many fields. It has been demonstrated that the chain reaction can be satisfactorily and safely controlled. Small experimental reactors have been built and successfully operated over a sufficient period of time to prove their technical feasibility. Extensive information concerning reactor technology has been established.

A large number of industry groups including electric power systems, equipment manufacturers, engineering firms, and others have made intensive studies of the technical, engineering, commercial, and economic aspects of atomic power. One of the major accomplishments during these past years is the great increase in the number of individuals with specialized knowledge in the field of nuclear physics, reactor technology, and related sciences.

We can point to the atomic-powered submarine Nautilus as an outstanding example of achievement. Although outside the field of atomic electric power, the success of this venture lends confidence to our ability to succeed in other applications of atomic energy.

Reactors Classified

When considering atomic power, one is immediately confronted with the many types of reactors, and variations of those types, which might be used to produce heat. To clarify this situation, it has been found convenient to classify reactors into three groups according to the use they make of the atomic fuels. These groups are:

1. *Utilization (or Non-Regenerative) Reactors.* These utilize only fissionable atoms; that is, U-233, U-235, or Plutonium (Pu-239). Such fuels can be produced only at very high cost and power reactors depending exclusively upon them likely will be impractical for electric power production except under very unusual conditions.

2. *Converter (or Partial Regenerative) Reactors.* These use natural uranium, or uranium (or thorium) enriched with U-233, U-235, or Pu-239 as the fuel. In this type of reactor, some of the neutrons given off in the fission process are used to transmute non-fissionable uranium (U-238) to Pu-239 (or thorium [Th-232] to U-233). Although such reactors can utilize only about 5 to 10 per cent of the total heat potential of the uranium, they come within the realm of economic production.

3. *Breeder (or Full Regenerative) Reactors.* These require a large amount of highly enriched fuel, to constitute the core, or critical mass, but produce more fissionable material than they consume. These reactors theoretically can use all the heat potential of uranium and are considered by many as indispensable to any large scale atomic power industry.

A more common method of classifying power reactors relates to certain of their physical characteristics as follows:

1. Pressurized Water
2. Boiling Water
3. Sodium Cooled Graphite Moderated
4. Breeder
5. Homogeneous

The order in which I have mentioned them has no particular significance, nor is there any direct correlation between these two methods of classifications. A pressurized water reactor, for example, may be either a converter or a utilization reactor. The same is true of boiling water reactors.

With the many kinds of reactors that are possible, much research and experimentation is needed before it will be possible to determine which reactors are best suited for electric power production, based on engineering and economic facts.

Several types of reactors show promise of ultimately being able to produce economically competitive power and concentrated efforts are being directed toward their development.

Developmental Efforts in U. S.

The present course of development in the United States can be summarized in the following manner:

1. The Atomic Energy Commission's Five-Year Reactor Development Program, formalized in 1954, comprises five different types of reactors considered at that time as having the greatest promise for use in the generation of power.

2. The Atomic Energy Commission in January, 1955, announced its Power Demonstration Reactor Program. Three large power reactors now have been approved for consideration as a part of this program.

3. Power reactor projects are being undertaken by private industry without governmental assistance. Three

large projects have been definitely announced and others are in the planning stage.

4. An extension of the Atomic Energy Commission's Power Demonstration Reactor Program, announced in September, 1955, includes small reactors, suitable for small power systems. The Commission announced in February, 1956, that seven proposals having power capacities from 2,000 to 40,000 kilowatts had been received. As of March 1, 1956, no action had been taken with respect to these proposals.

5. A large number of activities in the National Laboratories of the Commission, private industries, educational institutions, and elsewhere, will contribute importantly to the over-all program.

Well-Rounded, Practical Approach

From the foregoing, it is apparent that our broad approach to the matter of atomic power is well-rounded and practical. The goal of competitive atomic power, however, is still a long way off. And, in this connection, it must also be remembered that economic advances in the production of power by conventional means continue to be made. The target, therefore, is a moving one.

In evaluating the present status of atomic power, it will be useful to review the present programs of developments in terms of the types of reactors on which efforts are being concentrated.

Pressurized Water Reactors

Basically, the pressurized water reactor consists of enriched uranium fuel elements contained in a pressure vessel. Ordinary or heavy water pumped through the reactor serves as a moderator and as a means of picking up heat. From the reactor, the water is passed through a heat exchanged in which steam for the turbine is produced.

The reactor of the submarine Nautilus is of the pressurized water type. This, however, represents a highly special application in which compactness and other features dictated by military considerations played a controlling part in the design. It uses a highly enriched fuel and could hardly be considered economically suitable for the commercial production of electric power.

The Pressurized Water Reactor Project of the Atomic Energy Commission

The pressurized water reactor—PWR—included in the Commission's Five-Year Reactor Development Program, is to have a capacity of over 60,000 kilowatts of electricity. The reactor, owned by the Atomic Energy Commission, is being designed and manufactured by the Westinghouse Electric Corp. It will be installed at Shippingport, Pa., on the Ohio River, about 20 miles northwest of Pittsburgh. Duquesne Light Co. will install the conventional turbine-generator facilities, will operate the entire plant, and will purchase the steam produced by the reactor for use in its turbine-generator.

The plant is expected to be ready for operation in 1957 and will be the first large atomic power installation in the United States.

At a recent meeting, Admiral Hyman G. Rickover, who has full responsibility for the project, stated that with a capacity of 60,000 kilowatts, power produced by the reactor will cost more than 5.2 cents per kilowatthour. With an output of 90,000 kilowatts, power will cost 3.9 cents per kilowatthour. These power costs are high because a very large development expense is included in the capital investment.

Admiral Rickover further stated that with the experience gained from this project, it should be possible to build a "second generation" reactor, with a capacity of 90,000 kilowatts, which would produce power for 1.4 cents per kilowatthour. This may be compared with a cost of perhaps 0.6 cents per kilowatthour for power produced in modern coal burning thermal plants in the Pittsburgh area.

The Consolidated Edison Company of New York, Inc., Project

Early in 1955, Consolidated Edison Co. announced that it had entered into a contract with The Babcock & Wilcox Co. for a large pressurized water power reactor, to be built at Indian Point on the Hudson River, about 30 miles north of New York City. The fuel and fuel system of this reactor and many other features differ significantly from the PWR project.

Most importantly, a separate oil-fired superheater to raise the steam temperature to 1,000-F will be included in the plant. It is planned that the reactor will provide heat energy for the generation of about 150,000 kilowatts of electricity while the superheater will add additional heat for approximately 100,000 kilowatts. This reactor plant is expected to begin operation in 1960. Aside from a project cost of about $55 million no other detailed information of an economic nature is available.

Yankee Atomic Electric Company

A group of New England power systems has organized the Yankee Atomic Electric Co. to build an atomic power plant at Rowe, Mass. The Atomic Energy Commission announced recently that the proposed project has been approved as a part of the Power Demonstration Reactor Program.

This will be a pressurized water reactor with a net electrical capacity of 134,000 kilowatts. The entire plant is expected to cost $33,400,000 and to be ready for operation about 1960.

Boiling Water Reactor

The boiling water reactor is similar to the pressurized water reactor except that steam is generated directly in the reactor vessel from which it is delivered to the turbine, thus eliminating the heat exchanger. Offsetting this advantage is the possible need for more highly enriched fuel and the probable necessity for enclosing the turbine and associated parts within a shield because of the radioactivity of the steam and condensate.

Boiling Water Reactor Projects of the Atomic Energy Commission

The first experimental boiling water reactor, known as Borax I, was operated by the Commission in 1953 and appeared to have excellent characteristics with respect to self-regulation. It was destroyed in 1954 under some particularly severe test conditions which would not occur in normal operation.

The second experimental reactor of this type—Borax II—was completed in 1954. It was reported in 1955 that this reactor had produced enough power to serve the city of Arco, Idaho. Both of these reactors were small and operated at pressures and power levels much lower than commercially practical for the generation of electric power.

A third boiling water reactor, now being built by the Commission as a part of the Five-Year Reactor Development Program, is expected to have a capacity of 5,000 kilowatts of electricity. Allis-Chalmers Manufacturing Co. has the contract for building the reactor. The buildings for this project are well advanced and the reactor is scheduled for completion in 1956.

Nuclear Power Group Project

The Nuclear Power Group and the Commonwealth Edison Co. of Chicago have entered into a contract with the General Electric Co. to build a boiling water reactor plant near Dresden, Ill., to have a capacity of 180,000 kilowatts of electricity. The most recent information indicates that the steam pressure in this installation will be 1,000 pounds per square inch. The sponsors have stated that the cost of the plant will be $45 million and that it will be ready for operation in 1960. Of the $45 million, $15 million is for development work and $30 million represents the capital cost of the reactor plant, including the turbine-generator and all associated facilities. It is understood that based upon a $30 million investment, and normal depreciation charges, the cost of power produced will be approximately equal to that of power produced in conventional thermal plants.

Sodium Graphite Reactor

In the sodium graphite type of reactor, graphite is used as the moderator and liquid sodium is circulated through the reactor vessel to absorb and remove the heat. This type of reactor can use lightly enriched uranium as the fuel, and because of the physical properties of sodium, quite high temperatures can be achieved. Sodium pressures need be only high enough to induce the required circulation and the reactor vessel, therefore, is required to withstand comparatively low pressures.

The Sodium Graphite Reactor Project of the Atomic Energy Commission

The North American Aviation Co. is building a reactor of this type about 30 miles northwest of Los Angeles as a part of the Commission's Five-Year Reactor Development Program. It was originally intended that no electric generating facilities would be associated with this reactor. Recently, the Southern California Edison Co. has undertaken the installation of a 7,500 kilowatt turbine-generator at the site and will purchase steam produced by the reactor. Construction of this is well advanced and initial operation within the next few months is anticipated.

Consumers Public Power District Project

A proposal for the Power Demonstration Reactor Program submitted to the Atomic Energy Commission in March, 1955, by the Consumers Public Power District of Nebraska contemplated the construction of a sodium graphite reactor with a capacity of 80,000 kilowatts of electricity. This proposal was recently approved. North American Aviation Co. will build the reactor.

This is an excellent example of the way atomic power development by industry is proceeding. The experience gained in designing smaller units is being utilized in the design of larger units without waiting for the construction and operation of the initial smaller installations.

Fast Breeder Reactor

In this type of reactor, there is no moderator and the rate of energy release per unit of volume is very high. Surrounding the fuel elements there are elements of natural or depleted uranium called the blanket. During operation of the reactor, uranium in the blanket is transmuted into plutonium. As the name "breeder" implies, the amount of plutonium produced in the reactor can be made to exceed the amount of fuel burned.

Liquid sodium is used as the coolant in most breeder reactors because it has no moderating effect. Other coolants with similar characteristics are possible.

With the sodium coolant it is possible to attain relatively high steam temperatures and pressures. Breeder reactors, however, require a large amount of highly enriched fuel in the assembly of the critical mass. Because of the high residual content of fissionable material in the irradiated fuel elements, there is a complex problem with respect to processing. While this matter may have greatest urgency with respect to breeder reactors, it has an equally important relation to nearly all types of reactors.

Breeder Reactor Projects of the Atomic Energy Commission

Experimental Breeder Reactor I—EBR-1—built by the Commission at the National Reactor Testing Station near Arco, Idaho, first produced electric power in December, 1951. Although this reactor had a capacity of only 250 kilowatts of electricity, it demonstrated that breeding could actually be accomplished, and also gave great impetus to atomic power development. This reactor has been described in many published technical articles.

The Commission is now building EBR-II as a part of its Five-Year Reactor Development Program. This reactor, to have a capacity of about 15,000 kilowatts of electricity, will be located at Arco, Idaho, and is expected to be ready for operation in 1959. Construction work has not been started.

EBR-II will be designed primarily for experimental purposes with the thought that it may be used to carry on development work for many years. The study of such matters as increased fuel burn-up and the use of plutonium as a fuel is contemplated.

Power Reactor Development Co. Breeder Reactor Project

This project involves the construction of a developmental fast neutron breeder reactor with an electrical capacity of 100,000 kilowatts or more, as a part of the Commission's Power Demonstration Reactor Program.

The conceptual design of this reactor has been prepared by Atomic Power Development Associates, Inc., and is the result of more than five years of intensive study, research, and development work. The private industries that are members of APDA have contributed approximately $7,200,000 to this effort and budgets now planned for the next three years contemplate additional expenditures of about $12 million to complete further developmental work, testing of components, and other work required to make possible the final detailed design of the reactor.

Power Reactor Development Co., which will build, own, and operate the reactor, has 26 companies as its members. The reactor, which will cost

about $40,500,000, exclusive of the turbine-generator facilities, will be located on Lake Erie about 35 miles southwest of Detroit. It is planned that power will be generated in 1960.

The Detroit Edison Co. will build, own, and operate the conventional turbine-generator and related facilities. It will purchase the steam produced by the reactor and transmit the electric power produced to its own power system.

As a part of the Power Demonstration Reactor Program, the Atomic Energy Commission will do certain research and development work for this project, which at the present time requires the use of Commission facilities. The cost of this work has not been fully determined but may exceed $4 million. Certain other assistance, such as waiving the rental of special nuclear materials and the use of the Commission's facilities for the processing of irradiated fuel elements is contemplated.

Aside from this assistance, the entire project will be financed by funds made available by the member companies of Power Reactor Development Co. It is not possible at this time to make any estimate of the probable cost of producing power with this reactor. The sponsors are undertaking the project in an effort to develop subsequent reactors that can produce power on a competitive basis.

Homogeneous Reactors

A homogeneous reactor, as the name implies, is one in which the entire critical mass has the same composition. This is in contrast to other reactors in which the critical mass is composed of several different materials such as fuel, cladding, fuel assembly elements, moderating material, and so on.

In the homogeneous reactors which have been built, the fissionable material, or fuel, is contained in an aqueous solution, the water serving as a moderator. In one concept, the solution is pumped through a pressure vessel, called the core, where fission takes place, the heat being removed by passage of the solution through a heat exchanger. The core vessel may be contained within a second pressure vessel through which another solution is circulated. The second solution serves as a blanket and would pass through its own heat exchanger where heat is removed. If thorium is used in the second solution, it is possible from the standpoint of nuclear physics to accomplish breeding.

Many believe that this type of reactor has excellent potentialities in the field of atomic power.

Homogeneous Reactors of the Atomic Energy Commission

A small homogeneous reactor, designated HRE-I, built and tested during 1954 by the Commission at Oak Ridge, was found to operate successfully. It has been dismantled to provide space for the installation of HRE II, which embodies many modifications.

Homogeneous Reactor Experiment II—HRE-II—is being built as a part of the Commission's Five Year Reactor Development Program. It will have a capacity of 5,000 kilowatts of electricity and is expected to be ready for operation during this year, 1956.

PP&L-Westinghouse Advanced Homogeneous Reactor Project

In July, 1955, Pennsylvania Power & Light Co and Westinghouse Electric Corp. announced a program which will lead to the development and construction of an advanced type of homogeneous reactor with an electrical capacity of about 180,000 kilowatts. Initial operation is planned for 1962. This is a long-range project and work is actively in progress. No details as to cost or design features are available.

Overseas Development Work

Although power reactor development work is in progress in many countries overseas, significant developments of immediate importance are found only in Great Britain and Russia.

In Great Britain, construction of the Calder Hall plant, which has a gas-cooled, graphite-moderated reactor intended to produce 60,000 kilowatts of electricity, is nearing completion. Because of the very urgent need for power in England, the construction of several additional plants of this kind has been approved. It is reported that the cost of power produced by this type of reactor will not be substantially more than the cost of power produced in conventional coal-burning plants in England.

While there is no intention to be critical of the British program, it is significant to note that the gas-cooled reactor is not considered with favor by most of those in the United States interested in atomic power.

The British also are engaged in a breeder reactor project having a capacity of about 15,000 kilowatts of electricity. This development closely parallels the EBR-II project of the Atomic Energy Commission's Five-Year Reactor Development Program.

Russia announced last summer that it has a 5,000 kilowatt atomic power project in operation. The reactor, a pressurized water unit, was subsequently described in a Geneva Conference paper. While the reactor seems to differ in many respects from those under consideration in the rest of the world, it does not necessarily indicate any greater knowledge or experience than that possessed by ourselves or others.

Problems to be Solved

Each of the projects mentioned in the foregoing review of developmental activities faces many difficult problems which must be resolved before atomic power can become a practical reality. Brief comments concerning some of the more acute problems follow.

Initial Fuel Costs

Much has been said about the low costs of atomic fuels. Technically, low cost atomic fuels seem to be attainable, but at the present time this is not a reality because most reactors require enriched fuel. There are an enormous number of possibilities with respect to the composition and enrichment of the fuel which may lead to lower fuel costs. Only a few have been investigated and evaluated.

Design and Fabrication of Fuel Elements

Fuel elements presently being considered for reactors are characterized by their very complicated design and high cost of fabrication.

Fuel Burn-Up

At the present time, the fuel burn-up seems to be limited to not much over one per cent of the total atoms in the fuel elements because distortion of the fuel elements occurs when the burn-up exceeds this amount. Materials more resistant to fission damage must be found.

Fuel Reprocessing Costs

The irradiated fuel elements, and particularly those containing enriched fuels, contain substantial amounts of fissionable materials when removed from reactors. Practical low cost-methods for reprocessing these fuel elements and recovery of the residual fissionable materials are needed.

High Capital Cost of Reactors

As of today, the cost of building reactors appears far too high for practical purposes. This is due in part to the high cost materials which must be used and to the extremely complicated nature of the various components. Much simplification is essential before satisfactory costs can be attained.

Disposal of Radioactive Waste Materials

Because of the comparatively few power reactors presently being built, this subject has been given relatively little consideration. It is a major problem.

Liability Insurance

It is possible to incorporate safety features in reactors which will meet all foreseeable reactor hazards. Adequate insurance to cover these hazards is available now from commercial companies. There is the remote possibility, however, of accidents from causes beyond present knowledge which might scatter radioactive materials over wide areas. The liability which could result cannot be estimated or imagined and few, if any, private industries can risk such a situation.

Summary

The foregoing review of power reactor developmental activities reveals very extensive efforts to develop atomic power. The program in the United States is broad indeed, and proceeding remarkably fast considering the extremely complicated nature of the work. I believe that our progress substantially exceeds that of any other nation and that our program is one of which we can all be proud.

Nothing would be gained by a crash program of building reactors which would contribute only slightly to the fund of knowledge. Obviously, as significant new reactor concepts are developed, they should be brought into the various demonstration programs.

The following statements concerning the present status of atomic power seem justified.

1. Broad programs to develop atomic power reactors, which programs include all of the types of reactors that seem promising at the present time, are under way by governmental agencies and private industries.
2. Reactors of all sizes are included in these developmental programs. Private industries are devoting most of their efforts to large units because large reactors appear to have a greater possibility of being economically justified and they are essential to meet the load requirements of today's large power systems.
3. The reactors and prototypes built for the submarines Nautilus and the new Sea Wolf have demonstrated quite clearly that the use of atomic energy for power generation can be accomplished in a practical and acceptable manner if cost is not a major and dominant consideration.
4. No reactor has yet been built and operated which can produce electric power at as low cost as can be done with conventional methods, except possibly under extremely unusual conditions in remote locations.
5. The sponsors of nearly all of the present developmental projects believe it is unlikely that the power reactors now planned or under construction will produce power at costs competitive with conventional methods. The cost differential may be comparatively small in some instances, but will be very high in others.
6. The fuel cycle and related matters are one of the major engineering and economic problems. Fuel burn-up, the reprocessing of irradiated fuel elements, and long-range policy of the government in making special nuclear materials available for commercial power reactors, all have an extremely important effect on the decisions which ultimately must be made in determining which types of power reactors will be truly economic.
7. The present developmental programs and projects should produce, within the next five or ten years, experience and information which will make possible the design and construction of reactors which can produce electric power on a competitive basis.

There has been much criticism in recent months of the progress which is being made in atomic power development in this country. In my opinion, such criticism is not justified. We are making remarkably good progress considering the newness and complications of the situation and we are well in advance of other nations.

With our very great resources of fossil fuels, we are able to supply all requirements for electric power for many years to come. We do have the responsibility, however, for developing atomic power as rapidly as possible so that we, and the rest of the world, may enjoy any benefits which may result.

I am convinced we are fulfilling that obligation.

Ebasco Holds Ninth Safety Seminar

A group of 23 safety, operating, and personnel men, representing companies from the United States and Central and South America, attended the Ninth Ebasco Seminar in Public Utility Safety in New York February 27-March 9. The program was presented by Ebasco Services in cooperation with the New York University Center for Safety Education.

The two-week seminar is organized to cover in detail a complete safety program from inception to successful operation. Courses in effective speech, practical psychology, and supervisory training, as well as a problem-solving forum, were also offered for their value in developing the managerial potential of the men enrolled in the seminar.

Supplementing the lecture and discussion periods were a series of field trips to observe safety programs in operation at Long Island Lighting Co. and Consolidated Edison Co. of New York, Inc.; the Army safety and driver training program at Governor's Island; and a demonstration of fire protection equipment at the C-O-Two Fire Equipment Co.

Area Conception in the Development of Industrial Sales

By George E. Whitwell*

Vice President in Charge of Sales, Philadelphia Electric Company

An address before the Interstate Power Club, New York, N. Y., March 12, 1956

THE development of industrial power sales in a given area is accomplished in three ways.

I. By intensive cultivation and combing of existing customers to find applications for new uses of electricity;

II. By attracting to the area industry which can profitably operate there and by retaining existing industry; and

III. Insofar as is practicable, by the elimination of man-made disadvantages which are handicaps to the location of new industry in the area and to the retention or expansion of existing industry.

METHOD I—Existing Customers

With respect to Method I, the following can be said. To continue to grow, a utility must have a healthy economy throughout its service area. Therefore, wealth producing industry must flourish. These facts are true whether the basic industry of the region is agriculture, commerce, tourism, mining, or manufacturing.

Since our company is in a predominately manufacturing area, my remarks will be limited to industry. It is the responsibility of the industrial salesman to see that his customers take advantage of every opportunity to improve their products and to cut their costs. Only in this way can they be economically sound. The salesman does this job, of course, by bringing to his customer's attention all new technical electrical developments that may be applicable to this customer's business, whether it is electric heating, air conditioning, material handling, lighting, or automation.

The industrial salesman's responsibility does not end here. He should also be alert to recognize any adverse factors that may influence this customer's particular, and perhaps peculiar, operation and either report them to his management or others who can be helpful in solving these problems.

METHOD II—Industrial Climate

Industrial climate is an important factor too often overlooked by the industrial salesman as something he can do anything about. Yet he can and should.

Many companies now have Industrial Development or Area Development Departments primarily charged with this responsibility. Often the power salesman mistakenly looks on the people in this group as just a number of high pressure salesmen, running around the country with unlimited expense accounts and trying to high pressure industry into locating a plant in their particular area. There is no denying that they should, and do, promote their area by stressing the advantages that can be obtained from locating there.

In addition thereto, however, these men must devote a considerable portion of their time to determining the adverse factors, mostly man-made, that cause industry either to move out of their area, or not to establish plants in it. Having determined these factors and the data to substantiate a case, care must be exercised in helping to either alleviate or to correct. A utility need not be a front runner nor a drumbeater. Its job is to influence those who can do something about these adverse conditions, or, at least, to educate by providing basic facts so that the problems are recognized.

In this area of work, much can be done by the industrial salesman if he understands the problems facing industry in his area and the manner in which these factors influence the movement of industry. I sincerely believe that this relationship between industrial sales and industrial development is not generally understood by the salesman. Too often he believes these area problems are for the experts. He will be well advised to better understand the close relationship.

If a utility follows sound sales and development policies, then the area will be healthy and not only will industrial sales grow, but the area prosperity will help to insure the increase of sales in the other categories. This is another truth not always realized, in my opinion, by the salesman.

There are many factors favorable to industry location such as proximity to markets, proximity to raw materials, proximity to a port, good transportation, good labor market, good housing, community services, reasonable taxes, and land prices. There are also disadvantages.

METHOD III—Elimination of Man-Made Disadvantages

Among these disadvantages are an unbalanced tax structure, which is unfavorable to industry; high land prices; unfavorable community attitude toward industry; local governmental attitude toward law enforcement; the protection of property; and lack of sympathy with the problems of industry.

Piled on top of the possible presence of these man-made disadvantages, are (1) the modern tendency for industry to remove from congested localities into the countryside, and (2) the handicap which is generated by an industrial community, which grew up in multi-story buildings, but now finds itself in a situation where single-story buildings with ample parking space are essential.

I believe that all of these advan tages and disadvantages are certainly

* The author wishes to express his appreciation for the help given in the preparation of this paper by M. I. Allen, General Sales Manager; J. F. Gaskill, Sales Manager, Industrial and Commercial Department; and C. W. Deeg, Manager, Industrial and Commercial Development Division; all of Philadelphia Electric Co.

present in varying degrees in all our old and highly developed industrial areas and will, sooner or later, lift their heads in areas presently under development. I do not know the answer to the problems generated by these factors. It does seem to me, however, that the only way in which they can be partially overcome is by ceaseless vigilance. patience, and continuous selling of the idea of eliminating disadvantages insofar as it is practicable.

At the same time, the advantages of the area should be stressed to potential locators. Our objective should be to enable prospects to obtain a maximum amount of accurate information with respect to the advantages of the area so that they can complete their study of our suggestions as painlessly as possible. Over-all, we should never forget that the prosperity and growth of a utility in a given area are entirely dependent upon the growth and prosperity of all the economic units in the area.

The effect of the sum total of these advantages and disadvantages over the past ten years seems to have been favorable, at least with respect to the growth of the national economy and the area in which I happen to be personally and vitally concerned.

Area Development

The Philadelphia Electric Co. has been concerned with area development for 20 years and has had an active organized division for the past six years. The earlier years were spent in accumulating valuable data on our territory, assisting customers who wished to move, and processing those prospects who made inquiries.

Following the end of the war, a renewed interest in the area and its natural advantages was aroused. These advantages included the largest fresh water port in the world, and its position as a prime distribution and manufacturing area. From a market standpoint, within a 100-mile radius of Philadelphia are encompassed 15.8 per cent of the total population of the nation, 18 per cent of the business firms in the United States, and 15.4 per cent of the estimated retail sales in this country.

In 1950, the Industrial and Commercial Development Division of the Sales Department of the Philadelphia Electric Co. was organized to take advantage of this aroused interest, to aggressively present the potentialities of this area to the industry of the nation, and to assist our existing customers in their expansion problems. Our accumulated knowledge early indicated that industrial and commercial development is an area problem, encompassing much more than the territory of a single utility (in fact, five besides ours are involved in the Philadelphia area), and that the prosperity and success of the area would control the success and prosperity of each of its parts.

Triggering Enthusiasm

Something, however, was needed to trigger the dormant enthusiasm and resell many in the area on the tremendous potentials for expansion this area possessed. Probably the first factor to arouse interest and create enthusiasm was the announcement, about five years ago, by United States Steel Co. of the construction of the largest integrated steel plant in the world, The Fairless Works.

Closely following was the announcement of the construction of Fairless Hills and Levittown, huge housing developments covering vast acreage. This convinced even the skeptics that something big was going on.

Something further was now needed to define and weld the entire area into a unit, and the phrase "Delaware Valley, U. S. A." was a fortunate choice in that it included the Greater Philadelphia area, contiguous in nature and completely interdependent. It was euphonious and catchy, and could be used by everyone in the area, even the most provincial.

Sound Area Basis

Now for the first time, industrial and commercial development could proceed on a sound area basis. Everyone could present the advantages of his particular community and friendly competition was possible, but cooperation in the development of facts on "Delaware Valley, U. S. A." could proceed also on a sound basis.

The Chamber of Commerce of Philadelphia is now the Chamber of Commerce of Greater Philadelphia. The Delaware Valley Council, consisting of representatives from 11 counties, was formed and became active. Newspapers, radio, and television broadcast the advantages of the area to the nation and throughout the world. The Delaware River Port Authority was formed, and, together with the City of Philadelphia and neighboring municipalities, began promoting the great Port of Philadelphia throughout the world.

The various utilities in the area formed active development divisions. Public Service Electric and Gas Co. of New Jersey, Atlantic City Electric Co., Delaware Power & Light Co., Pennsylvania Power & Light Co., Metropolitan Edison Co. and Philadelphia Electric Co., all cooperating with the many existing development agencies, locally and state-wide, advertised the advantages of this area. Various other groups, such as the South Jersey Council, the local Chambers of Commerce, the various county and state planning commissions, the cities, boroughs, and townships, all became interested and formed additional groups to further develop the area for industry and commerce.

Aid From Activities

All these activities were of considerable aid. Far more accurate information became available on the entire area as a result of studies made by the groups which rapidly discovered that their problems were the problems of the area. For instance, it is not possible to plan highways, freeways, or turnpikes unless done for the area without regard to state or local boundaries. The mass movement of people throughout the territory becomes an area problem, not a local condition. The results have been very complete cooperation between everyone in the Delaware Valley and effective interchanges of information.

The result has been one of the fastest growing industrial and commercial areas in the United States. On all sides, we find new manufacturing plants, new distribution warehouses, and large new commercial centers rising. Stores, banks, and other formerly "Center of City" establishments are building branch facilities in rapidly rising new cities of homes, which only a few years ago were peaceful farms. More than 300 new plants of various sizes have been established in "Delaware Valley, U. S. A." during the last five years. They, together with the expansion of existing plants, represent an estimated capital expenditure of more than $3 billion. During

the last ten years, large commercial development, considering only projects of over $1,000,000 in Philadelphia, amounted to over $400,000,000. This figure is probably doubled in the entire Valley and increased by another 25 per cent if small commercial developments are considered.

During the same period, about 190,000 new homes were built in the Greater Philadelphia area, providing homes for 600,000 persons. Recent announcements show a continuing healthy growth of industrial, commercial and residential development. Such major firms as National Gypsum Co., Owens-Corning Fiberglas Corp., and General Electric Co. are building or will build huge plants in the Valley in the near future.

Bandwagon Appeal

Everyone now wants to get on the bandwagon. Community attitude is rapidly changing to favor industry; in fact, they are vying for it. Highway construction is opening new areas, bridges are being constructed, and freeways and turnpikes are being connected. Additional development councils or committees are being formed, and existing programs are being accelerated in many townships and boroughs throughout the Valley to make industry welcome.

All of this activity and progress came rapidly when the spark of progress was set off by the building of a steel plant and the birth of a phrase which united the area under a common title. It will continue to grow because of the fundamental soundness of the area and the slow orderly accumulation of basic data which were ready when the spark came to trigger its latent potentialities. Its future can best be gauged by the projections made for the years 1955-60.

Chamber of Commerce Survey

A recent survey made by the Chamber of Commerce revealed the expenditures for major capital improvements by industrial firms in the eleven-county area of greater Philadelphia will reach the figure of about $4 billion for this five-year period. Since commercial development closely follows industrial progress, this field will continue the rapid pace of the last decade. Similarly, housing will also follow this progress and continue its rapid growth. Some indication of this is revealed by the recent purchase of 5,000 acres of ground in New Jersey for the creation of the third Levittown. Incidentally, this development is not in the territory of our company; yet it will help the area and I am for it.

The Philadelphia Electric Co. will continue its cooperation with all of the agencies concerned with development in the area and will continue its advertising and promotional campaigns because we know "What's Good For Delaware Valley Is Good For The Philadelphia Electric Co." We believe that it is important for the industrial power salesman also to realize the important part which he can play in such area development.

---

29 Safety Merit Awards Point to Potential Record Year

TWENTY - NINE Safety Merit Awards, recognizing period of accident-free operation by electric companies for 1,000,000 man-hours or more, were presented by the Edison Electric Institute during the period January 1, 1956, through March 15, 1956.

This auspicious beginning points to a potential breaking of the record-year total of 97 Safety Merit Awards (presented in 1955), an achievement which will be surpassed if the number of awards presented during the last three quarters of this year increases in the same proportion as that of the first quarter.

Three 3,000,000 man-hour awards in this period, and five 2,000,000 man-hour awards, have boosted to 11 and 48, respectively, the number of certificates now outstanding in these two over-one-million categories.

The awards made during the initial period of 1956 were as follows:

Alabama Power Co.
- Electric Operations 2,000,658
- Electric Operations 1,837,025
- Southern Division 2,000,784

Appalachian Electric Power Co.
- Entire Company 1,232,076

Baltimore Gas and Electric Co.
- Electric Operations 2,015,282
- Electric Distribution Dept. 1,004,574

Boston Edison Co.
- Engineering & Construction Dept. 1,000,000

The Cincinnati Gas & Electric Co.
- Electric Distribution Dept.—Electric Meter Division 3,023,060

The Cleveland Electric Illuminating Co.
- Lake Shore Plant 1,000,000
- Electrical Operation & Engineering Group... 2,000,000

Consolidated Edison Co. of N. Y., Inc.
- Westchester Operations. 1,000,000
- Commercial Bldgs.—Operation Bureau 3,000,000
- Station Construction & Shops—
- Mechanical Construction. 1,000,000

Consumers Power Co.
- Electric Distribution Dept. — Lansing Division 1,001,709

The Detroit Edison Co.
- Production Dept.—Trenton Channel Power Plant 1,014,728
- Construction & Maintenance Dept. 1,010,100
- Delaware Power & Light Co. Northern Division ... 3,101,597

Duquesne Light Co.
- Substations & Shops Dept. —Operating & Tests Section 1,053,111

Florida Power & Light Co.
- Miami Beach Power Plant 1,000,000

Georgia Power Co.
- Atlanta Division I. 1,106,074
- Atlanta Division Appliance Repair 1,006,170

Kansas Gas and Electric Co.
- Entire Company 2,006,437

Mississippi Power & Light Co.
- Entire Company 1,603,170

Oklahoma Gas and Electric Co.
- Transmission-Distribution Dept. 1,000,000
- Entire Company 1,000,000

Southern California Edison Co.
- Eastern Substation Division 1,002,489

Texas Power & Light Co.
- Entire Company 1,517,129
- Entire Company 1,231,364

Virginia Electric and Power Co.
- Bremo Power Station... 1,511,826

First Demonstration of Fiber Glass Poles Is Jointly Sponsored by Consumers Power

THE first demonstration of the newly-developed fiber glass utility poles, a possibly revolutionary development in the electrical distribution field, was held at Alma, Mich., on March 19 under the joint sponsorship of Consumers Power Co. and Line Material Co., which will distribute the poles for the manufacturer, Gar Wood Industries. At that time, operating and performance characteristics were demonstrated, an experimental line in operation was inspected, and demonstrations were made of pole setting, pole climbing, and other field work.

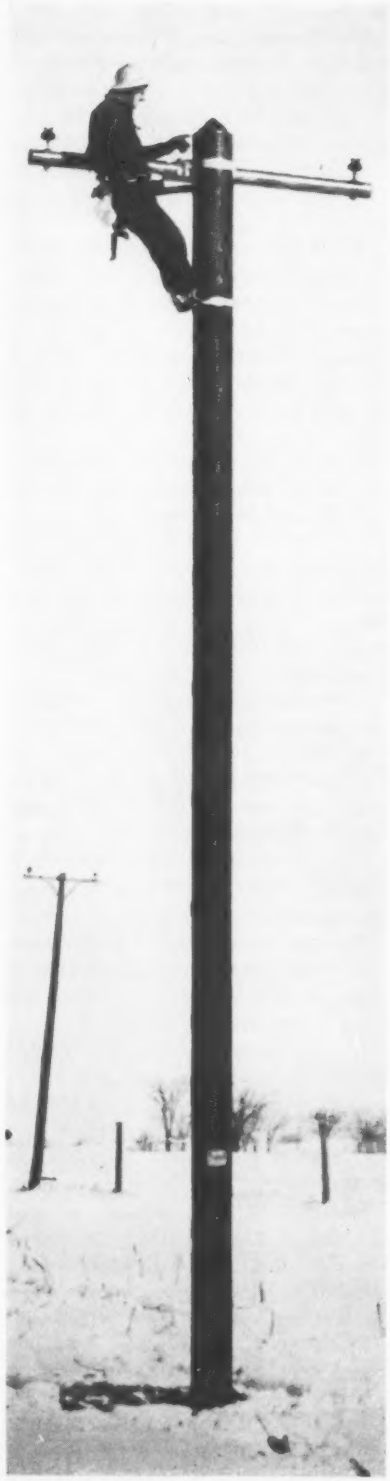
Consumers Power engineers have been working for almost two years with the manufacturer to develop the plastic poles. Two groups of experimental poles were installed in February, 1955, in electric distribution lines near Alma by Consumers Power. Meanwhile, test crews have developed new methods of installation.

New Poles' Advantages

The demonstration indicated that the new poles have many advantages over their wood counterparts. They're lighter, so they can be transported and installed cheaper than present poles. They can be built to precise standards of strength. Their insulating value is better than that of wood poles, and their estimated life of use is longer. In addition, they are said to be impregnable to wood peckers, termites, and sign-nailers.

Present for the demonstration were representatives of the press, industrial associations, universities, and The Detroit Edison Co., in addition to groups from Consumers Power Co., Gar Wood Industries, and Line Material Co.

In a standard 35-ft length, which will test to approximately Class 6 strength, the experimental poles can be lifted by two men—compared with the usual six for ordinary poles. Their weight at that length is 150 pounds compared with 450 pounds for cedar and 750 for pine poles. The new poles, which are 11 in. in diameter and capped at each end, are hollow cylinders or tubes of fiber glass and plastic. Their tubular walls are only ¼ in. thick, yet they are said to have a strength that is equal to low carbon steel.



One of the new fiber glass poles used in the experimental line at Alma, Mich., is shown at right.

Precise Strength Standards

E. V. Sayles, General Engineering Supervisor for Consumers Power Co., said at the demonstration:

"We have learned something of the characteristics of the materials of which the poles are made—enough, I am sure, to realize that the poles can be built to precise standards of strength because the strength of each fiber is known. This is quite different from wood poles, which are grown in the forest and whose strength depends upon rainfall, sunlight, and lots of other things. This makes us suspicious of the real strength of trees, and when we use them for poles to hold up wires, we make much allowance for such things. This often makes us use larger poles for fear that some may be weaker than others even though they are the same physical size. This situation has been recognized ever since poles were used to support overhead wires."

Mr. Sayles referred to the long history of use of wood poles and the advantages and disadvantages that had become apparent in their use. Then he said:

"Until recently, there has never been too great an incentive to develop a new kind of pole or one with longer life. Various methods of treating wood timber have been developed with great success through the years and have extended the life of wood poles to 30 or 40 years. However, in recent years it has been recognized that scarcity of pole timber could sooner or later be a very serious matter and that a substitute for wood must eventually be found. Obviously, any new material should have long life, good insulation characteristics, high strength, and should resist decay. Fiber glass poles have all of these features."

(*Continued on page* 128)

Florida Power & Light's Advertising Campaign Wins Freedom Foundation's Washington Medal

FLORIDA POWER & LIGHT CO. received a nation-wide honor on February 22 when Freedom Foundation presented the electric company with its encased George Washington Gold Medal for the nation's best local advertising campaign promoting the principles of American freedom.

The award was presented at special ceremonies on Washington's birthday at Valley Forge, Pa., is a reconverted barn that was once used by General Washington as his headquarters. The award donor, Freedom Foundation, has its headquarters at Valley Forge. Established in 1949, Freedom Foundation is a nonprofit, nonpolitical, nonsectarian organization supported by private contributions.

Florida Power & Light Co.'s prize-winning series of advertisements appeared monthly during 1955 in Florida newspapers and magazines, and were in the form of a salute to various groups of American workers.

Themes for the individual ads were: "Transportation . . . a force for Freedom!"; "Wings for Words . . . we freely speak!"; "Insurance for America's Future . . . a policy of Freedom!"; "They Build . . . a Firm Foundation for America's Better Living!"; "Our Retail Merchants are free to supply America's Growing Needs!"; "Engineering Looks Ahead . . . to keep us Free!"; "We Bank with confidence in a free America!"; "Wings . . . for a Free America!"; "Plans for a Free America!"; "Justice and Freedom . . . go hand in hand!"; "A Salute to Labor!"; "Freedom's first line of defense . . . our free press!"; "Our Health . . . is in free hands!"; "The Truth they teach . . . will keep us free!"; and "Food for a strong America . . . and food for thought!"

Copy for the advertisements emphasized that while the contributions of each of these groups to America's progress were outstanding, they were accomplished in the American way—utilizing the American right to work, live, and play in freedom.

As a result of hundreds of requests for reprints of the advertisements, and of many letters of commendation and appreciation, Florida Power & Light will rerun the series of advertisements this year.

At the presentation ceremonies, the Florida Power & Light award was accepted by Malcolm B. McDonald, Vice President in Charge of Advertising and Publicity for the company. Dr. Kenneth D. Wells, Foundation President who announced the award, paid tribute to the company's "effective advertising series at a local level showing the bundles of freedoms which we enjoy in America and which constitute our way of life, including the American judicial system, free labor, free press and enterprise." Admiral Arthur W. Radford, Chairman of the Joint Chief of Staffs and featured speaker for the occasion, made the presentation of the award.

In his acceptance speech, Mr. McDonald quoted these words of Washington, "Every valuable end of government is best answered by the enlightened confidence of the people, and by teaching the people themselves to know and to value their own rights; to discern and provide against invasions of them; to distinguish between oppression and the necessary exercise of lawful authority."

Freedom Foundation awards are presented in a number of categories. Florida Power & Light Co. was the top award winner in the state and local division of the advertising category. Winner of the Washington Medal for the national division, advertising category, was Timken Roller Bearing Co. of Canton, Ohio.

PUAA National Convention Marks 35th Anniversary of Ad Group

TO celebrate its 35th birthday as a national association of public utility company advertising men, the Public Utilities Advertising Association of America (PUAA) has slated its national convention at Philadelphia's Hotel Warwick May 10 and 11, thus tying in with that city's celebration of Benjamin Franklin's 250th anniversary.

In an atmosphere studded with tributes to America's first outstanding printer, and, some say, the first ad man, the Public Utilities people will hear an impressive slate of speakers including Theodore Roosevelt III, President of Americans for the Competitive Enterprise System; Nicholas Samstag of *Time* Magazine and Edwin Vennard, Managing Director-Elect of the Edison Electric Institute, among others.

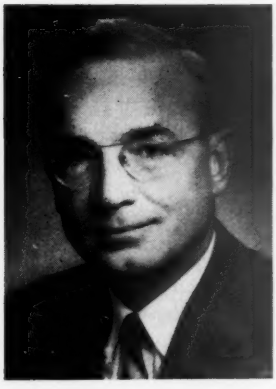
Organized in 1921 and 1922 by a scattering of utility ad men in many parts of the U. S., PUAA's first membership roster named 11 men; now, in 1956, the roster shows more than 400 names from 300 utilities in the U. S., Canada and some South American and Central American countries.

One of the highlights of the 35th annual meeting will be the awarding of prizes in the Association's Better Copy Contest, the grand old man among advertising circles as such contests are measured — it's the oldest continuing contest in the advertising world. It doesn't quite go back to Franklin, in years, but in spirit there may be some of the Old Gentleman in every judge who scrutinizes the thousands of entries in the many classifications the contest embraces.

Members of advertising and public relations departments in the electric and gas utilities in the Philadelphia area, along with members of the Poor Richard Advertising Club, will take the important role of hosts and guides for the Association meeting.

Officers of PUAA are: President, Raymond W. Fenton, The Peoples Gas Light and Coke Co.; First Vice President, Robert H. Bridges, The Cleveland Electric Illuminating Co.; Second Vice President, Richard D. Furber, Northern States Power Co.; Third Vice President, George W. Kindon, Philadelphia Electric Co.; Secretary, George G. Hanel, The Connecticut Light and Power Co., Hartford; and Treasurer, Mead Schenck, Interstate Power Co.

Personals



RAYMOND A. GIBSON

Kenneth P. Applegate, President of The Hartford Electric Light Co., has retired and Executive Vice President **Raymond A. Gibson** has been elected to succeed him. The company also has elected **William S. Barker,** General Manager, as a Vice President.

Mr. Applegate's service with the company covers more than 43 years, the last five years as president. Following his graduation from Troy Academy and from Rensselaer Polytechnic Institute, he entered the employ of the Hartford company in 1912 as a draftsman. Since that time, positions which he has filled include those of power salesman, purchasing agent, general manager, vice president, executive vice president, director, and president. He will continue to serve as a director.

He is a director of the Riverside Trust Co., the Phoenix Insurance Co., and Connecticut Fire Insurance Co. He is a life trustee of Rensselaer Polytechnic Institute and a member of its General Development Council. He was formerly president of the Hartford Rotary Club and the Government Research Institute, Inc., and a former director of the Hartford Chamber of Commerce and the Hartford YMCA. In addition, he was formerly vice president and director of the Hartford Electric Steel Corp., and former vice president of the Manchester Electric Co.

Mr. Gibson, who also has a long period of service, joined the company in 1923 in the Sales Department. A graduate of Rensselaer Polytechnic Institute, he has been advertising manager, commercial manager, assistant to the vice presidents, sales manager, vice president, and director.

He is a director of the Phoenix Mutual Life Insurance Co., the Aetna (Fire) Insurance Co., trustee of the Society for Savings, a trustee of Hillyer College, and a director of Connecticut Printers, Inc.

Mr. Barker, who will be vice president and general manager, was graduated in 1917 from Rensselaer Polytechnic Institute and entered the employ of the company that year. He has served as clerk, chief clerk, assistant purchasing agent, purchasing agent, and general manager. During World War I, he served as a lieutenant in the U. S. Air Corps.

Earl D. Edwards, Vice President in Charge of Operations of Central Illinois Light Co. since 1951 and a Director since 1954, has been elected President of the company to succeed **Thomas A. Schlink,** who has been elected Chairman of the Board and Chief Executive Officer. The new Executive Vice President is **George W. Hathway,** Administrative Vice President, who will also be in charge of financial matters. **Q. W. Wellington,** Superintendent of Power, was elected Vice President in Charge of Gas and Electric Operations.

Mr. Edwards has been associated with the company since 1923 when he was employed as chief engineer at one of the company's generating stations. An alternate director of Nuclear Power Group, Inc., Mr. Edwards is a life member of ASME and a registered professional engineer in Illinois. At one time he held the office of secretary of the Great Lakes Division of the National Electric Light Association's Prime Movers Committee.

Mr. Schlink, who recently celebrated the completion of 50 years of continuous service with the company, has been a director since 1927 at which time he was named secretary-treasurer. He was elected vice president in 1940 and became vice president and general manager in 1951.

EARL D. EDWARDS

Mr. Hathway was first employed by the company in 1932 and has served in numerous operating and administrative capacities since that time, including several years as division manager at DeKalb. He was elected vice president in 1951.

Mr. Wellington has been associated in public utility work since 1927 when he joined Commonwealth Power Corp. following graduation from the University of Michigan. He joined the company in 1936 and has supervised the construction of numerous power facilities. During World War II he was a member of the Navy's Seabees in Pacific operations. Mr. Wellington is a member of ASME, is a registered professional engineer in Illinois, and is a member of the operation committee of the Nuclear Power Group, Inc. He was named superintendent of power for the company in 1951.

Yankee Atomic Electric Co. has elected three vice presidents. They are **Sherman R. Knapp,** President, Connecticut Light & Power Co.; **Roger J. Coe,** Vice President, New England Power Co.; and **H. M. Johnson,** Chief District Engineer, New England Power Service Co.

Mr. Knapp joined CL&P in 1928 following graduation from Cornell University. He has served as an engineer in the Operating and Sales Department, New Milford district manager, assistant to the sales vice president, assistant to the president,

and executive vice president. His election to the presidency came in 1952.

Since becoming associated with New England Power in 1926, Mr. Coe has served as distribution assistant, assistant electrical engineer of New England Power Service Co., assistant chief engineer, and New England Power Co. engineer. In 1952, he was named assistant to the vice president and in mid-1955, vice president. He also served for a year as executive director of the Committee on Ordinance, Research and Development Board, Department of Defense, Washington, D. C.

Mr. Johnson, who is a Rensselaer Polytechnic Institute graduate, joined New England Power as a tester in 1917, became chief meter inspector in 1920, and meter engineer in 1928. He has been chief district engineer since 1949.

During National Engineers' Week festivities at Phoenix, Arizona, the presidents of 13 Arizona technical societies selected **Walter T. Lucking,** President of Arizona Public Service Co., as "Arizona's Engineer of the Year."

Three executives of The Washington Water Power Co.—**Marshall L. Blair, Kimball I. Jack,** and **W. L. Thraikill** — have been made Vice Presidents.

The new Vice President in Charge of Power Supplies, Mr. Blair, joined Washington Water Power as a substation attendant in 1926. At the time of his recent appointment he was manager of the Power Supply Department of WWP and a director of the Pacific Northwest Power Co.

Mr. Jack served as Manager of the General Sales, Promotion, and Information Department before elevation to his new position of Vice President in Charge of Sales, Promotion, and Public Information. He came to the company from Utah Power & Light Co. in 1939 to organize and manage the Advertising and Promotion Department.

Mr. Thraikill, who becomes Vice President in Charge of Operations, joined WWP in 1933 as an engineer in the Rate Department. He was designated assistant general manager of the company in 1944. Before joining WWP, he was assistant chief engineer of the Washington State Public Service Commission.

Joseph B. Fountain, Chief Engineer, Mississippi Power & Light Co., has been elected Vice President of his company.

Mr. Fountain began his career with MP&L as a student engineer in 1928 after his graduation from Mississippi State College. In his 27 years with the Mississippi Power & Light Co., he has held positions of increasing responsibility in its engineering section. When this section was established as a separate department in 1953, Mr. Fountain was appointed to head its operation. He has been chief engineer since 1947.

At Connecticut Power Co., recent promotions include those of **H. Warren Lawrence** to Vice President, **Charles Bolton** to Financial Vice President, and **Russell M. Lay** to Secretary and Treasurer.

Mr. Lawrence, General Manager for the past year, continues in that post. His former positions include those of general superintendent of electric operations, manager of the Farmington Division, and assistant to the manager of the Middletown Division.

Mr. Bolton, a vice president of the company for the past four years and secretary-treasurer since 1946, is succeeded in the latter post by Mr. Lay, assistant treasurer of Connecticut Power since 1951.

Four executive changes have been announced by Virginia Electric and Power Co.

James B. Hawkins has been elected Vice President of the Eastern Division to succeed the late **Robert J. Throckmorton. Forrest U. Ross,** Richmond Manager, has been appointed to the public relations staff of the company. He will be succeeded as Richmond Manager by **W. J. Cummins, Jr.,** now Personnel Director. **Arthur L. Clark,** now Assistant Treasurer, has been named as the new Personnel Director for Vepco.

Mr. Hawkins, who moved up from assistant vice president at Norfolk, was employed by Virginia Public Service Co. following graduation in 1926 from Virginia Polytechnic Institute. At the time of that company's merger with Virginia Electric and Power, he was manager of the Blue Ridge District, where he remained following the merger. He was named Vepco assistant president, Eastern Division, in 1952.

A graduate of Tri-State College, Mr. Ross joined Vepco in 1925 after several years with the Westinghouse Co. He has since filled various sales positions in Richmond, Fredericksburg, and Suffolk, and managerial positions in Williamsburg, Portsmouth, Norfolk, and Richmond.

Since joining the company in 1926, the year following his graduation from Lafayette College, Mr. Cummins has held positions of assistant sales manager, power sales engineer, and sales manager and manager in Vepco-served cities. In addition, he has been assistant to the vice president and personnel director.

Mr. Clark joined the company's Accounting Department in 1928. He worked throughout the company area in various accounting positions including chief accountant and director of auditing and procedures, prior to being named assistant treasurer in 1953. He is a member of the EEI General Accounting Committee.

Appointment of **Harvey E. Bumgardner,** Assistant to the Vice President and Controller, as Assistant to the President of The Detroit Edison Co. has been announced by President **Walker L. Cisler.** He will handle special assignments and continue to supervise Detroit Edison's international technical exchange programs. Such programs are arranged to enable overseas visitors to study Detroit Edison operations and to keep company employees up-to-date on overseas practices.

Mr. Bumgardner, who is a graduate of the University of Michigan, has been with Detroit Edison for 31 years. He rose through various assignments in the Production and Research Departments to become assistant to the vice-president and controller in 1953. In addition to his other company duties, he has been coordinator of the technical exchange programs for the past seven years.

He is consultant to the International Cooperation Administration and in that capacity has helped or-

ganize local and national technical exchange programs for the government and other organizations.

Mr. Bumgardner is Chairman of the EEI Committee on Technical Exchange for Overseas Visitors and is past chairman of the Detroit Section as ASME.

Named as Assistant Coordinator, International Technical Exchange, was **George L. Schlaepfer,** who will report to Mr. Bumgardner. Mr. Schlaepfer is a graduate of the Federal Institute of Technology in his native Zurich, Switzerland. He came to this country in 1923 and joined Detroit Edison as an electrical draftsman in 1925. Later he served in the Engineering and Research Departments and since 1930 has worked in the company library as an engineer and translator. He is a member of the Engineering Society of Detroit and the AIEE.

Walter J. Noigot has been named Supervisor of Plant Accounting and Records on the West Penn Power Co. general office staff. He replaces **A. L. Davies,** who recently retired after 49 years of service.

A graduate of Carnegie Institute of Technology, Mr. Noigot came to West Penn in 1923. Before joining the Plant Accounting and Records Department in 1941, where he has held the positions of section supervisor and assistant general supervisor, he gained experience in other phases of West Penn operations on the Drafting and Research Department staffs.

Mr. Noigot has been a member of the Plant Accounting and Records Committee of the Pennsylvania Electric Association and is at present a member of the EEI's Depreciation Committee.

James S. Greene, former Treasurer, Florida Power & Light Co., has been moved up to Assistant Comptroller, while **B. E. Wood,** former Assistant Treasurer, has been promoted to Treasurer. **T. T. Owens, Jr.,** was named Assistant Treasurer.

Mr. Wood began with FPL as a voucher clerk in 1928, moving through the various Treasury Department offices to assistant treasurer in 1941.

A former University of Miami student, he is a Southern regional vice president of the National Exchange Club, and former Miami and state president of that organization.

Mr. Greene had been treasurer of FPL since 1945. He joined the company in 1926 in Western Division offices located at that time in Lakeland. He was transferred to Miami as traveling auditor in 1928.

Mr. Owens, who is also assistant secretary of FPL, began with the company as an office boy in 1929. A former University of Miami student, he has moved through various Treasury Department jobs since becoming billing clerk in 1930.

Francis P. Gately has been appointed Auditor of Consolidated Edison Co. of New York, Inc. He succeeds **Arthur Hald,** retired.

Mr. Gately has been associated with Con Edison and its predecessor companies since 1916. At Brooklyn Edison as head of the General Accounting Bureau, he was engaged in accounting and tax matters. Later, at Consolidated Gas, he aided in the standardization of the accounting procedures of gas and electric companies since merged into Con Edison. In recent years, his work has dealt with corporative finance.

In past years, he was active in the National Electric Light Association and was president of the Society of Gas and Electric Accountants.

The promotion of **James D. Blythe,** Engineer and Special Representative, to the position of Administrative Assistant has been announced by Indianapolis Power & Light Co. Mr. Blythe has specialized in the engineering of public lighting, which will continue to be one of his responsibilities.

A graduate of Purdue University, he was an appraisal engineer for the Public Service Commission of Indiana before entering Ipalco employ in 1939. Since 1948, Mr. Blythe also has been general manager of Mooresville Public Service Co., Inc., the Ipalco subsidiary which supplies electricity in and near Mooresville and six other communities in Morgan, Hendricks, Putnam, and Owen counties.

Three top-level promotions within Carolina Power & Light Co. have been announced.

Fiber Glass Poles

(*Continued from page* 124)

Since the installation of the test poles, they have been exposed to temperatures that ranged from below zero to over 100 F in the sun. In addition, the University of Michigan has tested the durability of the poles. Life expectancy of the poles is now estimated at 50 to 100 years.

Because conventional linemen's climbers will not penetrate fiber glass poles, detachable pole "steps" are now used by linemen. These metal "steps" fit into holes manufactured into the pole. They are placed by the lineman as he ascends, and removed as he climbs down the pole.

Crossarms for the poles are also plastic-impregnated fiber glass. The test line made use of crossarms that were 4 in. in diameter, 8 ft long, and clamped to the poles with metal. Another design, displayed at the demonstration, is a "slip through" arm, almost totally devoid of hardware, which develops practically the same ultimate strength of the more conventional technique using braces.

The experimental poles are mahogany colored, but they can be made in various tints. In addition, there is a belief that they can be made fluorescent or reflective, thereby becoming a warning device in the interest of safety.

Additional responsibility is being assigned to **H. B. Robinson,** Vice President, who recently was named General Manager. In addition to the Operating and Engineering Department, Mr. Robinson will have responsibility for the following three departments: District Operations, headed by Vice President **J. C. Richert, Jr.**; Personnel, directed by **M. T. Dunlap;** and Right-of-Way, managed by **Richard Seawell.**

A. J. Skaale was promoted to Manager of the Operating and Engineering Department. He also will report to Mr. Robinson.

R. S. Talton, Production Engineer, was promoted to Superintendent of Power, succeeding Mr. Skaale. Mr. Talton will be responsible for generating plants, system operations, and communications.

EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

OFFICERS

HARLLEE BRANCH, JR., *President*.....Georgia Power Co., Atlanta, Ga.
D. S. KENNEDY, *Vice President*.....Oklahoma Gas and Electric Co., Oklahoma City, Okla.
H. S. BENNION, *Vice President and Managing Director*....420 Lexington Avenue, New York, N. Y.
EDWIN VENNARD, *Vice President*.....420 Lexington Avenue, New York, N. Y.
H. S. SUTTON, *Treasurer*.....Consolidated Edison Co. of New York, Inc., New York, N. Y.
A. B. MORGAN, *Secretary and Assistant Managing Drector*...420 Lexington Avenue, New York, N. Y.

BOARD OF DIRECTORS

(Terms expiring 1956)

D. E. ACKERS.....The Kansas Power and Light Co., Topeka, Kan.
W. C. BECKJORD.....The Cincinnati Gas & Electric Co., Cincinnati, Ohio
JOSEPH M. BELL, JR.....New York State Electric & Gas Corp., Binghamton, N. Y.
WALKER L. CISLER.....The Detroit Edison Co., Detroit, Mich.
B. L. ENGLAND.....Atlantic City Electric Co., Atlantic City, N. J.
R. K. LANE.....Public Service Co. of Oklahoma, Tulsa, Okla.
P. H. MCCANCE.....Duquesne Light Co., Pittsburgh, Pa.
R. E. MOODY.....Union Electric Co. of Missouri, St. Louis, Mo.
HARRY B. MUNSELL.....Kansas City Power & Light Co., Kansas City, Mo.
O. TITUS.....Pennsylvania Electric Co., Johnstown, Pa.
W. O. TURNER.....Louisiana Power & Light Co., New Orleans, La.
G. W. VAN DERZEE.....Wisconsin Electric Power Co., Milwaukee, Wis.
WILLIAM WEBSTER.....New England Electric System, Boston, Mass.
ERWIN H. WILL.....Virginia Electric and Power Co., Richmond, Va.
FRANK M. WILKES.....Southwestern Gas and Electric Co., Shreveport, La.

(Terms expiring 1957)

W. J. CLAPP.....Florida Power Corp., St. Petersburg, Fla.
J. E. CORETTE.....The Montana Power Co., Butte, Mont.
C. P. CRANE.....Baltimore Gas and Electric Co., Baltimore, Md.
A. S. CUMMINS.....The California Oregon Power Co., Medford, Ore.
THOMAS G. DIGNAN.....Boston Edison Co., Boston, Mass.
E. W. DOEBLER.....Long Island Lighting Co., Mineola, N. Y.
JOHN W. EVERS.....Commonwealth Edison Co., Chicago, Ill.
C. E. IDE.....The Toledo Edison Co., Toledo, Ohio
S. R. KNAPP.....The Connecticut Light & Power Co., Berlin, Conn.
C. B. MCMANUS.....The Southern Co., Inc., Atlanta, Ga.
R. S. NELSON.....Gulf States Utilities Co., Beaumont, Texas
W. A. PARISH.....Houston Lighting & Power Co., Houston, Texas
HAROLD QUINTON.....Southern California Edison Co., Los Angeles, Calif.
L. V. SUTTON.....Carolina Power & Light Co., Raleigh, N. C.

(Terms expiring 1958)

J. L. BATES.....Central Power & Light Co., Corpus Christi, Texas
A. M. BEEBEE.....Rochester Gas and Electric Corp., Rochester, N. Y.
F. D. CAMPBELL.....Cambridge Electric Light Co., Cambridge, Mass.
C. B. DELAFIELD.....Consolidated Edison Co. of New York, Inc., New York, N. Y.
R. H. FITE.....Florida Power & Light Co., Miami, Fla.
R. H. GERDES.....Pacific Gas and Electric Co., San Francisco, Calif.
N. B. GUSSETT.....Iowa Power & Light Co., Des Moines, Iowa
E. L. LINDSETH.....The Cleveland Electric Illuminating Co., Cleveland, Ohio
D. C. LUCE.....Public Service Electric and Gas Co., Newark, N. J.
M. S. LUTHRINGER.....Central Illinois Public Service Co., Springfield, Ill.
C. E. OAKES.....Pennsylvania Power & Light Co., Allentown, Pa.
H. T. PRITCHARD.....Indianapolis Power & Light Co., Indianapolis, Ind.
K. M. ROBINSON.....The Washington Water Power Co., Spokane, Wash.
L. M. SMITH.....Alabama Power Co., Birmingham, Ala..
HAROLD TURNER.....American Gas and Electric Co., New York, N. Y.

Executive Committee

W. L. Cisler, C. B. Delafield, E. L. Lindseth, D. C. Luce, C. E. Oakes, Harold Quinton, L. V. Sutton, G. W. Van Derzee, William Webster

EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

ADVISORY COMMITTEE 1955-1956

D. C. BARNES.....Virginia Electric and Power Co.
A. D. BARNEY.....The Hartford Electric Light Co.
J. B. BLACK.....Pacific Gas and Electric Co.
EDGAR H. DIXON.....Middle South Utilities, Inc.
PHILIP A. FLEGER.....Duquesne Light Co.
GEORGE M. GADSBY.....Utah Power & Light Co.
WILLIS GALE.....Commonwealth Edison Co.
ALLEN S. KING.....Northern States Power Co.
J. E. LOISEAU.....Public Service Co. of Colorado
GEORGE L. MACGREGOR.....Texas Utilities Co.
EARLE J. MACHOLD.....Niagara Mohawk Power Corp.
J. W. MCAFEE.....Union Electric Co. of Missouri
LYLE MCDONALD....Public Service Electric and Gas Co.
PAUL B. MCKEE.....Pacific Power & Light Co.
I. L. MOORE.....New England Electric System
W. C. MULLENDORE.....Southern California Edison Co.
GROVER C. NEFF.....Wisconsin Power and Light Co.
J. S. OSBORNE.....Central & South West Corp.
WALTER H. SAMMIS.....Ohio Edison Co.
H. R. SEARING.....Consolidated Edison Co. of New York, Inc.
MCGREGOR SMITH.....Florida Power & Light Co.
PHILIP SPORN.....American Gas and Electric Co.
FRANK M. TAIT.....The Dayton Power and Light Co.
J. B. THOMAS.....Texas Electric Service Co.
E. S. THOMPSON.....The West Penn Electric Co. (Inc.)
J. R. WHITING.....Consumers Power Co.

CHAIRMEN OF EDISON ELECTRIC INSTITUTE COMMITTEES (1955-1956)

ACCOUNTING

Accounting Division Executive, J. C. FARIS.....Union Electric Co. of Missouri, St. Louis, Mo.
Coordinator of Customer Activities, S. A. COLE.....New York State Electric & Gas Corp., Ithaca, N. Y.
Customer Accounting, J. C. LUCHSINGER.....The Cincinnati Gas & Electric Co., Cincinnati, Ohio
Customer Collections, R. B. WILLIAMS.....The Toledo Edison Co., Toledo, Ohio
Customer Relations, H. F. MARTIN.....Long Island Lighting Co., Mineola, N. Y.
Coordinator of General Activities, C. T. DWIGHT.....The Hartford Electric Light Co., Hartford, Conn.
Depreciation Accounting, P. K. READ.....New York State Electric & Gas Corp., Ithaca, N. Y.
General Accounting, R .J. PLOURDE.....The Detroit Edison Co., Detroit, Mich.
Internal Auditing, BIRON GANSER.....Philadelphia Electric Co., Philadelphia, Pa.
Plant Accounting and Property Records, M. B. ROMEISER.....Niagara Mohawk Power Corp., Syracuse, N. Y.
Taxation Accounting, H. M. HOBSON.....Public Service Electric and Gas Co., Newark, N. J.

COMMERCIAL

Commercial Division Executive, O. R. DOERR.....Pacific Gas and Electric Co., San Francisco, Calif.
Commercial Sales Group, R. W. BUTTS.....Ohio Edison Co., Akron, Ohio
Farm Group, BUD S. MOSS.....Georgia Power Co., Atlanta, Ga.
Industrial Power and Heating Group, G. S. YOUNG.....Kansas City Power & Light Co., Kansas City, Mo.
Residential Group, H. H. BRENAN.....Pennsylvania Power & Light Co., Allentown, Pa.
Special Service Group, F. C. PESVEYC.....Public Service Electric and Gas Co., Newark, N. J.

ENGINEERING

Engineering Division Executive, E. L. HOUGH.....Union Electric Co. of Missouri, St. Louis, Mo.
Electrical Equipment, C. L. DERRICK.....The Hartford Electric Light Co., Hartford, Conn.
Hydraulic Power, L. B. CARD.....Public Service Co. of Colorado, Denver, Colo.
Meter and Service, GEORGE J. YANDA.....The Cleveland Electric Illuminating Co., Cleveland, Ohio
Prime Movers, JOHN M. DRISCOLL.....Consolidated Edison Co. of New York, Inc., New York, N. Y.
Transmission and Distribution, GEORGE H. FIEDLER.....Rochester Gas and Electric Corp., Rochester, N. Y.

GENERAL

Accident Prevention, RAYMOND W. WHITE.....Pacific Gas and Electric Co., San Francisco, Calif.
Area Development, JOHN R. FREDERICK.....Wisconsin Power and Light Co., Madison, Wis.
Atomic Power, EDGAR R. DIXON.....Middle South Utilities, Inc., New York, N. Y.
Awards, G. W. OUSLER.....Duquesne Light Co., Pittsburgh, Pa.
Electric Power Survey, ARTHUR S. GRISWOLD.....The Detroit Edison Co., Detroit, Mich.
Financing and Investor Relations, W. J. ROSE.....American Gas and Electric Co., New York, N. Y.
General Division Executive Committee, D. S. KENNEDY.....Oklahoma Gas & Electric Co., Oklahoma City, Okla.
Industrial Relations, JOHN C. ARNELL.....Consolidated Edison Co. of New York, Inc., New York, N. Y.
Insurance, R. D. CONSTABLE.....Niagara Mohawk Power Corp., Syracuse, N. Y.
Legal, D. BRUCE MANSFIELD.....Ohio Edison Co., Akron, Ohio
Membership, E. S. THOMPSON.....The West Penn Electric Co. (Inc.), New York, N. Y.
Purchasing and Stores, W. M. HOLLS.....Baltimore Gas and Electric Co., Baltimore, Md.
Rate Research, C. A. WILLIAMS.....The United Illuminating Co., New Haven, Conn.
Regulation, J. E. CORETTE.....The Montana Power Co., Butte, Mont.
Research Projects, C. W. FRANKLIN.....Consolidated Edison Co. of New York, Inc., New York, N. Y.
Statistical, F. A. KEANE.....Public Service Electric and Gas Co., Newark, N. J.
Tax Policy, C. B. MCMANUS.....The Southern Co., Inc., Atlanta, Ga.
Technical Assistance for Overseas Visitors, HARVEY BUMGARDNER.....The Detroit Edison Co., Detroit, Mich.
Transportation, RANDOLPH WHITFIELD.....Georgia Power Co., Atlanta, Ga.

ght Co.
System
son Co.
ght Co.
t Corp.
son Co.
son Co.
rk, Inc.
ght Co.
ric Co.
ght Co.
vice Co.
(Inc.)
ver Co.

is, Mo.
, N. Y.
ti, Ohio
o, Ohio
, N. Y.
, Conn.
, N. Y.
, Mich.
hia, Pa.
, N. Y.
k, N. J.

o, Calif.
n, Ohio
nta, Ga.
ty, Mo.
wn, Pa.
k, N. J.

is, Mo.
l, Conn.
r, Colo.
d, Ohio
, N. Y.
r, N. Y.

o, Calif.
n, Wis.
, N. Y.
rgh, Pa.
, Mich.
, N. Y.
y, Okla.
, N. Y.
, N. Y.
n, Ohio
, N. Y.
re, Md.
, Conn.
, Mont.
, N. Y.
k, N. J.
nta, Ga.
t, Mich.
nta, Ga.